

The Sanitary Institute
INTER-DEPARTMENTAL COMMITTEE ON PHYSICAL
DETERIORATION.

REPORT

OF THE

INTER-DEPARTMENTAL COMMITTEE

ON

PHYSICAL DETERIORATION.

VOL. I.—REPORT AND APPENDIX.

Presented to both Houses of Parliament by Command of His Majesty.



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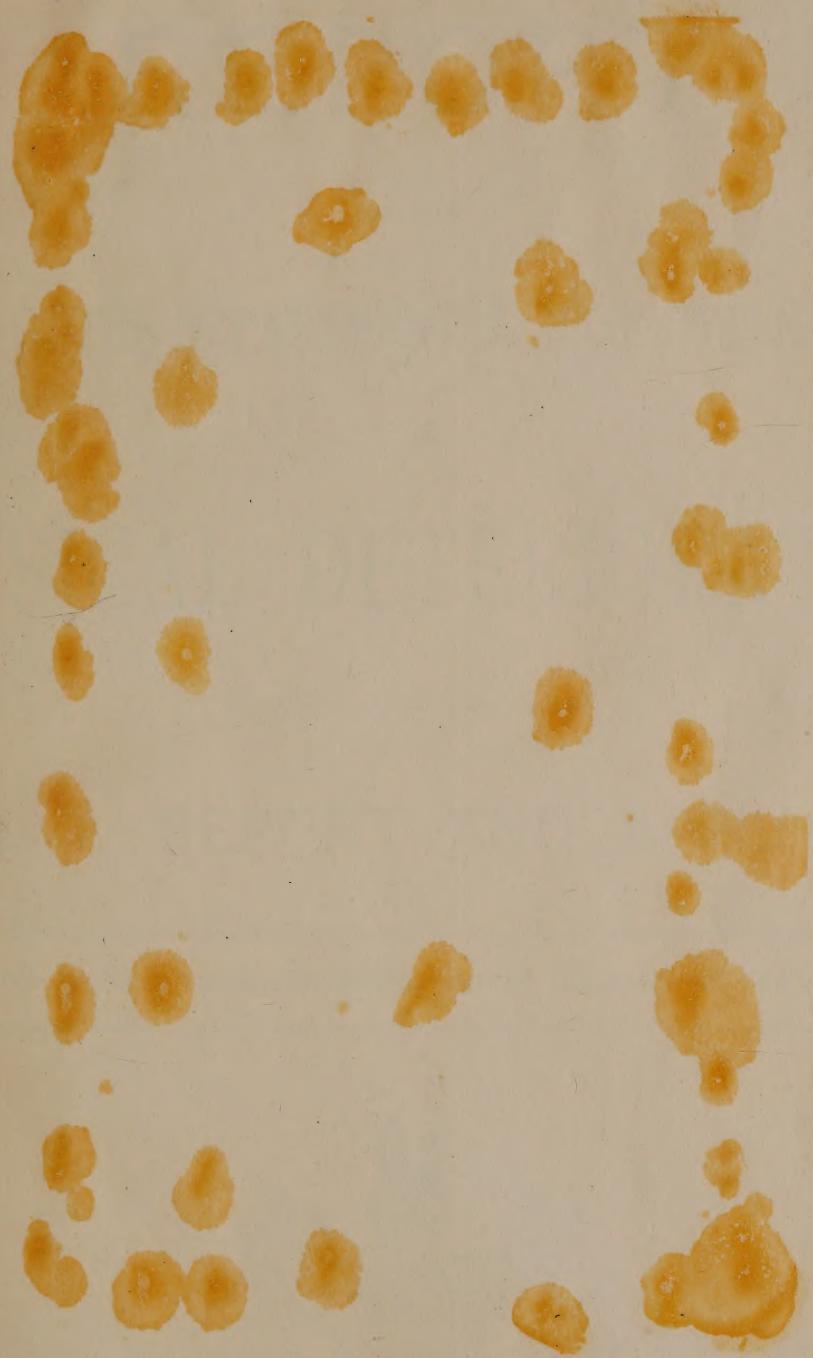
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INTER-DEPARTMENTAL COMMITTEE ON PHYSICAL
DETERIORATION.

VOLUME I.

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CONSTITUTION OF COMMITTEE.

MR. ALMERIC W. FITZ ROY, c.v.o., Clerk of the Council (*Chairman*).

COLONEL G. M. FOX, H.M. Inspector of Physical Training under the Board of Education.

MR. J. G. LEGGE, H.M. Inspector of Reformatory and Industrial Schools.

MR. H. M. LINDSELL, c.b., Principal Assistant Secretary to the Board of Education.

COLONEL G. T. ONSLOW, c.b., R.M.L.I., Inspector of Marine Recruiting.

MR. JOHN STRUTHERS, c.b., Assistant Secretary to the Scotch Education Department.

DR. J. F. W. TATHAM, m.d., F.R.C.P., of the General Register Office.

MR. ERNEST H. POOLEY, Barrister-at-law, *Secretary*.

TERMS OF REFERENCE.

The original TERMS OF REFERENCE to the Committee were :—

To make a preliminary enquiry into the allegations concerning the deterioration of certain classes of the population as shown by the large percentage of rejections for physical causes of recruits for the Army and by other evidence, especially the Report of the Royal Commission on Physical Training (Scotland), and to consider in what manner the medical profession can best be consulted on the subject with a view to the appointment of a Royal Commission, and the terms of reference to such a Commission, if appointed.

These TERMS OF REFERENCE were subsequently explained and enlarged, as follows :—

(1) To determine, with the aid of such counsel as the medical profession are able to give, the steps that should be taken to furnish the Government and the Nation at large with periodical data for an accurate comparative estimate of the health and physique of the people; (2) to indicate generally the causes of such physical deterioration as does exist in certain classes; and (3) to point out the means by which it can be most effectually diminished.

R E P O R T .

TO THE LORD PRESIDENT OF THE COUNCIL.

MY LORD MARQUESS,

1. The Committee appointed by your Lordship's predecessor, the Duke of Devonshire, late Lord President of the Council, under His Grace's order of reference of the 2nd day of September, 1903, beg leave to report that they have sat on twenty-six days for the purpose of hearing evidence and that they have examined sixty-eight witnesses, from England, Scotland and Ireland, of whom fifty-four were men and fourteen women. Out of this number, twenty-three (twenty men and three women) held official positions, either under His Majesty's Government or under Local Authorities throughout the Kingdom, in connection with Local Administration, Schools and Factories; thirteen of the official witnesses were members of the medical profession, which besides was represented by twenty-one other witnesses, seven of whom were specially nominated to give evidence by the Royal Colleges of Physicians and Surgeons and by the British Dental Association; two witnesses were noted anthropologists, two were Members of Parliament, and the remainder were either independent authorities or representative of well-known organizations and charitable institutions.

2. For convenience sake this Report is divided into three parts, the first consisting of an examination into the evidence deducible from the War Office figures and a statement of the steps required to obtain reliable *data* for determining questions of national physique, the second and largest part dealing with the causes and indications of degeneracy in certain classes of the community and the means by which it may be arrested, and the third part containing a summary of the principal recommendations which the Committee desire to make.

P A R T I.

3. Before the Committee proceeded to take personal evidence they deemed it their duty under the terms of their reference to consider what information of a documentary character was available which could throw any light upon the questions they were directed to investigate.

4. The Memoranda issued by the War Office upon the responsibility of the Director-General of the Army Medical Service and the Inspector-General of Recruiting were necessarily the first to engage their attention. It appeared that soon after the publication of these Memoranda the Secretary of State for the Home Department had addressed a communication to the Royal Colleges of Physicians and Surgeons respectively, asking for observations on a proposed inquiry into the causes which have led to the rejection in recent years of so many recruits for the Army on the ground of physical disability, and the possible measures by which this state of things might be remedied. By the courtesy of the Secretary of State the Committee were furnished with copies of the replies of both Colleges, which, with subsequent correspondence, will be found in the Appendix.

Appendix I.

5. It is sufficient to state here that these replies appeared to point to the following conclusions: (1) that the evidence adduced in the Director-General's Memorandum was inadequate to prove that physical deterioration had affected the classes referred to; (2) that no sufficient material (statistical or other) was at present available to warrant any definite conclusions on the question of the physique of the people by comparison with *data* obtained in past times; (3) that a partial investigation, as for instance into the condition of the classes from which recruits are at present mostly drawn, might be very misleading, however carefully conducted, and might give rise to erroneous conclusions on the general question unless checked by expert knowledge.

6. The Royal College of Physicians were, however, disposed to think that an inquiry into the present physical condition of the nation would be of great value ; but the Royal College of Surgeons, on the other hand, did not see any particular need for any such investigation on a large scale, deeming that the well-known facts relating to public health were sufficient to dispel anxiety.

7. Both Colleges having laid stress upon the fact that the figures included in the Memorandum of the Director-General did not appear to them to support the view that an increasing deterioration in physique is taking place in the classes of the population from which military recruits are chiefly drawn, and the Royal College of Physicians having failed to obtain information through the Home Office which might explain the apparent contradiction between the general tone of the Memorandum and the figures given, the Committee thought it expedient to ask the Secretary of State for War to obtain from the Director-General some further explanation of his views and also to furnish any information in the possession of his Department that hrew light upon the figures included under Head 1 of the first Table in the original Memorandum, comprising "labourers, servants, husbandmen, etc., " from which classes by far the largest number of recruits were drawn. To the first request the Secretary of State for War was good enough to respond at once, and in a Memorandum, which was supplemented by some valuable tables bearing on the existing state of facts, Sir William Taylor expressed the opinion that the idea of "progressive physical deterioration" had occupied a much too prominent position in the minds of those who had had to consider and report as to the advisability of inquiry. The Director-General went on to say :

"I consider that it is impossible to obtain reliable statistical or other *data* regarding the conditions that have existed in the past; and, consequently, as no reliable *data* are obtainable for purposes of comparison, I do not see how the question can be dealt with from the progressive deterioration point of view. Whether or not there has been, or is, progressive physical deterioration among the classes now in question is a matter of very great importance, no doubt; but, in my opinion, it is not the chief question from a practical standpoint. To my mind the principal question for the Committee is to inquire into the causes and present extent of the physical *unfitness* that undoubtedly exists in a large degree among certain classes of the population. The question dealt with in my original Memorandum was not that there was evidence of progressive physical deterioration of the race, either in whole or in part, but that it is a most disturbing fact that from 40 to 60 per cent. of the men who present themselves for enlistment are found to be physically unfit for military service. Even if the proportion is no greater than in the past, surely it is a state of matters worthy of the closest investigation, and one which no thinking man can wish to see continue. Moreover, it would be out of keeping with the progressive spirit of the times we live in for us to be content with the consolation that we are no worse off than we were fifty or even twenty years ago. I trust that the inquiry may end in suggestions that will lead to the institution of measures which will result in bringing about a marked improvement of the physique of the classes from which our recruits are at present drawn."

8. The Committee proceeded to forward copies of this Memorandum and the accompanying Tables to the Royal Colleges of Physicians and Surgeons respectively, with the request that they would take them into consideration ; and while favouring the Committee with any observations it was desired to make, would be careful to state whether the perusal of the supplementary matter so furnished suggested the modification in any degree of the opinions previously expressed on the subject.

9. In their replies, it was noted by both Colleges that some little misapprehension had been caused by the tenour of the first Memorandum as to the question which it was intended to place before them, but the College of Surgeons did not think it had appreciably affected their judgment, which remained the same after a perusal of the second Memorandum. The College of Physicians, on the other hand, while adhering to the opinion "that sufficient *data* were not available for forming a judgment on the extremely complex question of the occurrence or not of progressive degeneration in the classes from which recruits are mainly drawn," expressed themselves in favour of "an inquiry into the present extent and causes of the alleged physical disability for military service of certain classes of the population."

10. In supplement of the request for a more detailed sub-division of the classes denominated "Labourers" in the Recruiting Returns, under which head agricultural labourers and street loafers are included without discrimination, it was subsequently suggested to both the Admiralty and the War Office that the sub-heads might with advantage follow the classification shown in the Census Summary Volume for 1901, and the Committee have reason to believe that the Admiralty have already adopted the suggestion.

11. In their efforts to obtain information of a statistical or tabulated character which might form the basis of a comparative survey of the health and physique of the population the Committee were not very successful. As a matter of fact, no such information on a comprehensive or systematic scale exists.

12. Disjointed and partial inquiries have taken place from time to time in connection with which measurements of a number of persons were made, but these inquiries were not instituted in any relation to each other nor conducted on similar lines, so that the results obtained are of very little use for the purpose of comparison.

13. In 1873, at the instance of the Local Government Board, Dr. Bridges and Mr. Holmes investigated the conditions of employment in the Textile Factories in regard to its effect on the health of women, children, and young persons, in the course of which some 10,000 children were examined and measured, the principal indications of degeneracy noted, and certain general conclusions summarised. Had such an investigation been repeated decennially valuable material would have been collected for the purpose of the present inquiry; but as it was, it did little more than establish, in respect to the limited area covered, that the factory children of factory parents (urban and suburban) compared unfavourably with children in non-factory districts (urban and rural), and that the rate of mortality, particularly infant mortality, was unduly high in factory districts.

14. A few years later the British Association for the advancement of Science was responsible for a more ambitious effort in the same direction. A Committee, whose labours extended over five years, 1878–1883, was appointed for the purpose of making a systematic examination of the height, weight, and other physical characters of the inhabitants of the British Isles and collecting the results. During the period covered facts relating to the stature and height of 53,000 persons of all ages and both sexes were collected, 8,585 of whom were adult males, distributed as follows: England, 6,194; Scotland, 1,304; Wales, 741; Ireland, 346; but here again no later investigations on a considerable scale offer adequate material for comparison. In order to make such a comparison effective the samples must, in the first instance, be numerous enough; each must be taken in sufficient numbers, not less than a thousand, from districts so small that there is no sensible variation in the type of people within its boundaries; and the classes whose average dimensions are given must be carefully differentiated, so as to present, as far as possible, homogeneous material to the investigator. The British Association Report shows that there is a considerable difference in the average dimensions of the different classes of the population. The average stature, for example, of boys between the ages of eleven and twelve at public schools was 54·98 inches, while of boys of the same age at industrial schools it was only 50·02. There was thus a difference of 5 inches in the average stature of boys belonging to the two extreme classes measured. The difference in the statures of the two extreme classes of adults was not so great, being only 3½ inches, but it was still considerable.

15. The bearing of these facts upon the taking of samples for comparison at different dates is obvious, and in only four cases since 1883, so far as the Committee are aware, have measurements been taken, by the aid of which a more or less legitimate comparison may be made with the figures then obtained, but in no case on any considerable scale.

16. Thus in the British Association's statistics it is found that the average stature of 109 adult males taken from the counties of Aberdeen, Banff, Elgin, and Nairn was 68·04 inches ; in 1895–1897 measurements of 364 of the rural and urban population of East Aberdeenshire were obtained, showing an average stature of 68·02 inches. In the second case, where the conditions of accurate comparison are more nearly fulfilled, the British Association Report gives the average stature in the period 1874–75 of boys at Marlboro' College between the ages of 14 and 16 as 61·4 inches, whereas statistics for boys of the same age in the period 1899–1902 show an average stature of 61·96 inches, an increase of ·56 in 25 years. In the third case the British Association Report gives the average stature of 635 adult males from Connaught as 68·72 inches; Messrs. Cunningham, Haddon, and Browne have measured in Connaught, mostly on the West Coast, about 200 adult males with an average stature of 67·41 or 1·32 inches less than the other, but owing to the small numbers measured the possible variation of difference in samples is 1·05. To the extent, therefore, that the difference of the two averages exceeds this figure there may be evidence of deterioration, but it is not conclusive, as there is no guarantee that the racial type and class was the same at both dates. In the fourth case, a physical census in Industrial Schools in 1901 (the results of which, after being laid before the Royal Commission on Physical Training in Scotland, were corroborated by a further census in 1903) enables a comparison to be made with the height, weight and chest measurement of children forming the lowest class in physical development dealt with in the British Association's report of 1883. The result of the comparison, for what it is worth, clearly indicates improvement in the physical development of this class at the ages of 11 and 14.

17. A list of the principal groups of anthropometric statistics, other than those already mentioned, which have been collected in the British Isles since 1883, will be found in the Appendix, but they are of no use for the purposes of this inquiry.

18. In pursuance of the scheme of procedure dictated by the terms of their reference, the first evidence invited by the Committee was that of the Director-General of the Army Medical Service, Sir W. Taylor, and of the late Inspector-General of Recruiting, General Borrett, to which it will be necessary to allude at some length, together with that of General Sir Frederick Maurice, which was given on the same day in the same connexion.

19. It may be as well here to state a general criticism on the value of the War Office figures, to which prominence was given by a later witness. In the opinion of Professor Cunningham, perhaps the most unreliable evidence is that which is obtained from the recruiting statistics,

Cunningham, 2188.

"Because the class from which the recruits are derived varies from time to time with the conditions of the labour market. When trade is good and employment plentiful it is only from the lowest stratum of the people that the Army receives its supply of men : when, on the other hand, trade is bad, a better class of recruit is available. Consequently the records of the recruiting department of the Army do not deal with a homogeneous sample of the people taken from one distinct class."

Further confirmation of this view is to be found in the striking disparity from year to year of the educational qualifications of recruits as disclosed in the Returns.

20. It is only fair to Sir W. Taylor to say that he most emphatically disclaimed any responsibility for the deductions that had been drawn from the figures published by his department. He appeared to attach very little value to the figures, and in reply to a question calling attention to a passage in the Report of the Inspector-General of Recruiting, where that officer speaks of the gradual deterioration of the physique of the classes from which recruits are principally taken, he said, "He is not justified in that. We have no *data* on which to form that opinion."

21. An apparent improvement in the last quinquennial period, as compared with that immediately preceding it, is accounted for by instructions issued to recruiters in 1897, to weed out those who present themselves, instead of sending them all on to the medical examiner, and the influence of the war on the character of the recruits is another disturbing element in any deductions that can be drawn from recent figures.

22. On the other hand, increased stringency in the requirements as to teeth has materially swelled the percentage of rejections for the last two years. In this connexion a table handed in by the Director-General may here be noted. This table, gives the ratio per 1,000 of the rejections under the four principal causes for the years 1901, 1902. These causes are, Want of Physical Development ; Defective Vision ; Disease of the Heart ; and Bad Dentition ; the ratio differing considerably according to the various classes of recruits tabulated.

Appendix VI.

23. It is, the Committee believe, recognised on all hands that dental caries does not necessarily or even commonly coincide with physical degeneracy in other respects, nor is it a defect that is peculiar to any particular class ; while defective vision, which in most cases means want of acuity, and can easily be remedied by glasses, cannot with any more justice be associated with depressed physique.

24. In this last connexion it may be as well to note here that Mr. John Tweedy, President of the Royal College of Surgeons, and a high authority on ophthalmic surgery, gave it as his opinion that where some lack of normal acuity was associated with a sound eye, it was undesirable to make it a ground of rejection, and that in all cases of comparatively slight deviation from the minimum standard of distant vision further investigation should be made, and, if expedient, the defect supplied by equipping the recruit with glasses, the objections to which course he did not think of any great weight ; for, as he reminded the Committee,

Tweedy, 3799-3808.

"While every soldier is theoretically expected to fight, in practise many thousands of soldiers take no part in action, and there are innumerable duties to be performed during peace and even on a campaign which these men might properly perform as efficiently as those who have perfect sight."

Tweedy, 3808
(Addendum).

25. Both the Director-General and the late Inspector-General of Recruiting were fain to admit, on being pressed, that the real lesson of the recruiting figures was the failure of the Army, under present conditions, to attract a good type of recruit. Indeed, General Borrett gives up the case for wide-spread deterioration when he says, "It is a pity that the physique of the recruit-giving class is as poor as it is, so as to cause such a large percentage of rejections for the Army;" and again when in answer to a question whether "the men who want to be soldiers" were not those people who have no opening in life, or have no occupation, and who drift to the recruiter in the vague hope that they may be passed, he replies, "There are a great many of that kind, no doubt ; I must confess a great many are that way." In another part of his evidence he describes them as very largely "Rubbish," and Sir W. Taylor could not deny that even if the number rejected by the recruiters was as large as some people suppose, it might merely imply that a great many

Borrett, 163.

Borrett, 179.

Borrett, 166.

"Not fit for or disinclined to permanent work present themselves to the recruiting sergeant on the chance of being passed, and that the condition of those rejected is only representative of the state of the wastrels of the large towns who live by casual labour."

Taylor, 20.

26. As another witness observed, it is the years after leaving school that determine so many lives ; by the time the boy has reached seventeen he has shown either self-improvement or self-deterioration, in which last case you may get him for a soldier. At seventeen, he goes on to say,

Eichholz, 560-2.

"You are landed with the failures, and the lack of self-improvement which they have exhibited is largely bound up with their physical condition. At seventeen they become street loafers—practically the only available source of recruiting for the army."

27. Mr. Charles Booth gives a vivid description of these persons in the 4th Volume of the Series on London Labour :

"These men hang about for the 'odd hour' or work one day in the seven. They live on stimulants and tobacco, varied with bread and tea and salt-fish. Their passion is gambling. Sections of them are hereditary casuals; a larger proportion drift from other trades. They have a constitutional hatred to regularity and forethought and a need for paltry excitement; they are late risers, sharp-witted talkers, and, above all, they have that agreeable tolerance for their own and each other's vices which seems characteristic of a purely leisure class, whether it lies at the top or the bottom of Society."

28. Some figures furnished by Dr. Alexander Scott make it clear that there is a wide difference between the physical condition of the class referred to in the preceding paragraphs and that of the working classes proper. Of 83 candidates drawn from factories in the western district of Glasgow who presented themselves for the Army and 7 for the Navy (90 in all) 85 were accepted. One of the men rejected had presented himself with the same result at four different recruiting stations, a circumstance which suggests a line of possible explanation for a considerable proportion of rejections generally.

29. In short, the examination of the official representatives of the recruiting system left upon the minds of the Committee the conviction, confirmed as it was by the evidence of other witnesses, that it would be as reasonable to argue from criminal statistics to the morals of the great mass of the people, as it would be to argue to their physical conditions from the feeble specimens that come under the notice of recruiting officers.

30. An independent examination of the Director-General's figures, undertaken by the authorities of the Metropolitan Police, brought them to the conclusion that "the calling of a soldier has ceased to attract the class of men who formerly enlisted, and as a consequence a larger proportion of the residuum of the population come under the notice of the Army Recruiting Authorities."

31. This conclusion appears borne out by the complaints of commanding officers as to the physique of many of those enlisted, and tends to explain the drain from desertion among those who find themselves disappointed in the hopes of an easy existence.

32. It must be understood that in so expressing themselves the Committee have in view the quality of the rejected candidates for enlistment. So far as they can judge, the efforts that are now being made to obtain a good character with every recruit are likely to result in raising the standard not merely of those actually accepted, but even perhaps of those who present themselves to the recruiter.

33. The evidence of Sir Frederick Maurice did not modify the impression produced by that of the two preceding witnesses, nor could the Committee accept the basis of the alarmist statement for which he is responsible, that of those who wish to be soldiers only two out of five are to be found in the ranks at the end of two years. Sir Frederick obtains this result by taking the 34·6 percentage of rejections by medical examiners, and the 2·1 percentage of those cast before the completion of two years, and adding thereto a purely conjectural percentage as to those previously rejected by the recruiters.

34. It was stated by Sir W. Taylor that no record whatever of these latter was preserved, but the Committee think that if this could be done without involving too much labour, it might be useful to dispel false impressions as to the actual number. Looking, however, to the condition of the classes from which, as it has been seen, these people issue, the proportion, even if as stated by Sir F. Maurice, is not so very disquieting; indeed, a very competent medical witness took the view that having regard to the circumstances under which the British Army is recruited, the fact that 40 per cent. of those that present themselves to the recruiting officers become

good soldiers is more to the credit of the physique of the people than the fact that under the German system of conscription only 16 per cent. of those liable to serve are rejected.

35. The Committee had the advantage at the same time of inspecting certain figures touching Naval and Marine recruits, which were furnished by the Admiralty through Colonel Onslow and will be found in the Appendix.

Appendix VII.

36. A close comparison between Admiralty and War Office Statistics is hardly possible, as in the first place the Naval regulations for medical examination are more stringent, especially as regards eyesight and teeth, while on the other hand the great bulk of recruits for the Naval Service are probably drawn from a higher social level.

37. All Naval and Marine recruits must produce a good record of character from a reliable source. All must be fairly well educated, no illiterates being accepted, and arithmetic is required of Artificers and Artisan Ratings, who must also be certified skilled at their trade, while Boys, who form about 37 per cent. of the recruits, come from a decidedly superior class. Even in the case of Stokers and Marines, who are more on a par with Army Recruits, the standard of measurements ensures that they are not drawn from the "wasters."

38. Under these conditions, of 14,848 candidates who had passed the recruiters as satisfying the standards of height and chest measurement, and were subsequently medically examined in Royal Marine Recruiting Districts in 1902-3, 25·7 per cent. were rejected, as against 23·1 per cent. for the Army, and in three years, 1900-03, of 21,916 examined in London alone, 32·1 per cent. were rejected.

39. While deeming it their duty to make certain criticisms on the significance of the figures supplied by the War Office, the Committee are not insensible of much that is grave in the state of things disclosed, and that calls for fuller information and more complete inquiry, and to that end they early proceeded to consider what steps should be taken to furnish the Government and the nation at large with periodical *data* for an accurate and comprehensive comparative estimate of the health and physique of the people.

40. It appeared to them that the machinery of the ordinary type of Royal Commission was both unsuitable and inadequate; it has been seen that there are not sufficient facts obtainable from the labours of past investigators to be made the subject of comparison with any that a Royal Commission might elicit, and its *modus operandi* would be both slow and costly. What seems to be wanted is some permanent organization, not necessarily on a large or expensive scale, which, under expert direction, and in collaboration with all the Departments of State concerned, shall be charged with the duty of collecting and tabulating facts which throw light upon the situation, and thus provide means by which those interested in the subject may at any moment satisfy themselves of the progress of the nation one way or another.

41. Every witness who was examined on the subject testified to the great value of such facts in determining questions relative to the physique of the people. Though opinions differed as to the amount and method of observation necessary, it was admitted on all hands that anthropometric records were the only accredited tests available, and that if collected on a sufficient scale they would constitute the supreme criterion of physical deterioration or the reverse. It was also held that the school population and the classes coming under the administration of the Factory Acts offered ready material for the immediate application of any system that might be devised.

42. The Committee found that by a singular coincidence the British Association for the Advancement of Science had, at their last congress, determined to resume the work which they had undertaken with such interesting results in the years 1878-83, and that a Committee had been appointed to organize Anthropometric Investigation, on the basis of (1) establishing uniform standards; (2) ascertaining which measurements are likely to prove the most fruitful in result; and (3) formulating broad lines of co-operation. The Committee lost no time in placing themselves in communication with the Chairman and Secretary of the British Association Committee, and both these gentlemen, Professor D. J. Cunningham, of the University of Edinburgh, and Mr. J. Gray, were good enough to attend and explain how they thought such a Bureau of Information might be formed, and the duties it should be called upon to perform. A scheme will be found in the Appendix for which they are jointly responsible, though Mr. Gray went with greater detail into questions of organization and cost.

Appendix II.

43. In the evidence with which he prefaced a description of this scheme, Professor Cunningham expressed one or two scientific opinions of great value in their bearing on the subject-matter of the Committee's investigation. After referring to the manner in which poverty, with its squalor, its bad feeding and its attendant ignorance as to the proper nurture of the child, depresses the physical standard of the lower classes, he went on to say,

Cunningham, 2210.
 "In spite of the marked variations which are seen in the physique of the different classes of the people of Great Britain, anthropologists believe, with good reason, that there is a mean physical standard, which is the inheritance of the people as a whole, and that no matter how far certain sections of the people may deviate from this by deterioration (produced by the causes referred to) the tendency of the race as a whole will always be to maintain the inherited mean. In other words, these inferior bodily characters which are the result of poverty (and not vice, such as syphilis and alcoholism), and which are therefore acquired during the lifetime of the individual, are not transmissible from one generation to another. To restore, therefore, the classes in which this inferiority exists to the mean standard of national physique, all that is required is to improve the conditions of living, and in one or two generations all the ground that has been lost will be recovered."

It is this constancy of physical dimensions under normal conditions that furnishes the scientific basis upon which depends the whole value of anthropometric statistics, as a test of physical deterioration.

44. In reply to a question whether, in his experience, as an anatomist, he had noted any changes in structure unfavourable to development, Professor Cunningham said,

Cunningham, 2219.
 "No, with the one exception of the teeth. It is an obvious fact that the teeth of the people of the present time cannot stand comparison in point of durability with those of the earlier inhabitants of Britain. Those who have the opportunity of examining ancient skulls cannot fail to be struck with this."

Later he proceeds,

Cunningham, 2225.
 "In the white races of Europe the jaws are undergoing a slow process of shortening. The stunted character of the wisdom or backmost teeth, the small amount of space allotted to them, their variability, their late appearance, and indeed their frequent failure to appear at all, bespeak this change in the jaws. Through it the teeth are reduced in size, more crowded together, and therefore more liable to disease. Indirectly this may tend to favour the early degeneration of the teeth which is so marked a feature of the present age; but I take it that the real cause of this degeneration is the striking change which has taken place in the character of the food."

Cunningham, 2245,
et seq.
 45. In proceeding to explain his scheme for the establishment and working of a Central Anthropometric Bureau, Professor Cunningham asked leave to treat the matter under three headings:—

I. Consultative Committee.

46. To obtain absolute uniformity in the methods of procedure in each of the three countries it would be advisable, he thought, to appoint an Honorary Consultative Committee, which should consist of three members, one from each of the three kingdoms. These appointments should be

honorary, but the ordinary allowances for travelling expenses should be granted. The members of this Committee should be anthropologists of acknowledged reputation who are acquainted with the structure of the human body and the laws which regulate its development and growth. They should be likewise men of weight and influence. The duties of the Committee would be :—1. To determine the measurements and observations to be made; 2. To determine the instruments to be employed; 3. Along with the Director of the Central Bureau, to construct the form of card by which the observations are to be recorded; and 4. Each in his own country to advise and assist the permanent officers in any cases of difficulty that might arise, and above all to interest the people at large in the work.

II. Central Bureau.

47. The Central Bureau should be established in London, and should be organised somewhat upon the same plan as the Geological Survey Office. It would probably be necessary to appoint a Director and Deputy Director. One of these should be an anthropologist acquainted with the anatomy and development of the human body, and with experience in anthropometrical work; the other should be a statistician trained in modern scientific methods. A statistical department would also require to be organised in the Bureau. The work carried out in this office would be the following: 1. To keep the standard instruments and issue all the instruments required in the inquiry; 2. To issue the cards on which the observations are to be recorded to those engaged in the measuring, etc.; 3. To arrange surprise visits at intervals to different schools, etc., with the view of determining whether the surveyors were obtaining accurate results; 4. To receive the cards after they have been filled up, to classify them, to prepare the requisite statistical tables, and publish a yearly report; 5. To form in London a centre where the different classes of the people may be measured, and a centre also where the surveyors or measurers may be instructed in the methods of making their observations, and in those anatomical details which are requisite for the acquisition of accurate results; and 6. To disseminate information on anthropometrical work and create an interest in the public in regard to the importance of maintaining the national physique.

III. Surveyors or Measurers.

48. The real difficulty in devising a working scheme consists in determining how the measurements are to be taken and how the survey shall be carried out.

49. With regard to the measurements to be taken, Professor Cunningham thought that, in the event of the establishment of a Central Bureau, the decision as to what particular facts it would be expedient to note and classify might with advantage be relegated to the Consultative Committee. The measurements and tests would require to be selected with great care and judgment, and they should not be too numerous. Probably, the following would be sufficient, though information regarding parentage, district of birth, and conditions of living should also be obtained.

1. Height.
 2. Chest girth (*a*) maximum.
(*b*) minimum.
- This gives the range of the thoracic play, which is important.
3. Weight.
 4. Head—length—breadth—height.
 5. Breadth of shoulders (callipers).
 6. Breadth of hips (callipers).
 7. Vision Tested (1) by Snellens' type.
(2) by different colours.
 8. Degree of Pigmentation.

The witness considered the eighth test of importance, in order to correct what might otherwise be erroneous deductions from racial peculiarities.

50. With regard to the method of survey, Professor Cunningham's scheme contemplates the appointment of a staff of skilled surveyors as measurers. The survey would be gradual and continuous, and each country (England, Scotland and Ireland) would be mapped out into a definite number of districts, severally to be the field of investigation for each year during a decennium; not only would care have to be taken to obtain samples in sufficient number and of a fairly representative type, but such districts would have to be so delimitated as to secure so far as possible an homogeneous mass of material for periodic examination.

51. By the time the whole country had been covered, the survey would be recommenced at the same point and be proceeded with in the same order so that sets of facts, collected under as far as possible similar conditions and relating to the same areas would decennially be at the disposal of the State and serve as a basis for comparison, in the absence of which all witnesses agreed that allegations as to physical degeneracy must remain matter of impression or conjecture.

52. The Committee deemed it of special importance to obtain the opinions of the Royal Colleges of Physicians and Surgeons on the scheme as a whole, and were particularly careful to ask them to state the minimum number of tests they thought sufficient. The College of Surgeons was the first to report as follows:—

"Having regard to the fact that no trustworthy statistics or other *data* are available for the purpose of comparing the physical condition of the nation at the present time with that which obtained in the past, or for forming the basis of a comparison with that which may obtain in the future, the Council of the Royal College of Surgeons are of opinion that the adoption by Government of a scheme for an Anthropometric survey of the United Kingdom, such as that proposed by Professor Cunningham, is greatly to be desired."

"The scheme appears to the Council to be well calculated to elicit those facts, of which a knowledge is essential to the formation of any opinion as to the physical improvement or deterioration of the race, and they, moreover, believe that the results of the investigation would be of great scientific value and interest."

"With regard to the measurements and tests to be used, the Council approve those recommended by Professor Cunningham. They, however, think that the value of the investigations would be increased by the addition of the measurement of the lower extremities from the crest of the ilium."

53. After prolonged consideration, the College of Physicians informed the Committee:—

"They are of opinion that the value of having trustworthy statistics and other *data* available for the purpose of comparing the physical condition of the population from time to time cannot be over-estimated."

"Whilst approving the measurements and tests suggested in paragraph 14 of Professor Cunningham's memorandum, they consider that in the case of children the circumference of the head should be ascertained as well as the other measurements."

"The College desire to bring to the notice of the Physical Deterioration Committee their opinion that the scheme for carrying out the Anthropometric survey—occupying ten years in its completion—would fail to give satisfactory standards for comparison for many years to come; they would, therefore, represent to the Committee the desirability that the Physical Census should be completed within a shorter period; and they further consider that it will be advantageous to the State that every child admitted to a Primary school should have its height, weight, and certain other data annually recorded during attendance at school."

54. Without pledging themselves, therefore, to an approval of the plan proposed in all its details the Committee are emphatic in recommending the creation of an organisation on the lines indicated; and regard it of the highest importance towards the collection of authoritative information on the subject of the present inquiry that the survey should be undertaken at the earliest possible moment.

55. The Committee fully recognise the value of the scheme submitted by Professor Cunningham and Mr. Gray, but they are impressed with the importance of the concluding observations of the College of Physicians, representing the desirability of the Physical Census being completed within a shorter period, and pointing out the advantage of recording the physical

facts connected with every child admitted to a Primary School. This has led the Committee to consider whether some modification in the scheme which has been described above would not be feasible. Mr. Gray himself appeared to admit in the course of his examination that the machinery might be simplified, and the area of observation reduced, without injury to the objects the Committee had in view, as for instance by restricting to some extent the number of tests and measurements to be applied, by the employment, where possible, of School Teachers and Certifying Factory Surgeons, of course at a suitable fee, in lieu of professional Surveyors, and by limiting the observation of particulars relating to children of school age to two periods of their school life. The Committee cannot help feeling that some such modification of the scheme will cover the most fruitful field of investigation, and afford results which can be published annually. It is needless to conceal the fact that in all probability it will not be easy to induce people of all classes to submit to investigation. In the work which was carried out in Ireland this was a constant source of trouble, and in many cases, even with the assistance of the parish priest, it was only possible to obtain a comparatively small number of observations. On the other hand, there can be little difficulty in getting the facts as to elementary school children, especially if the Committee's recommendation in favour of a closer medical inspection of such schools be adopted. Nor will there be greater difficulty in obtaining the facts as to children when they leave school for the factory, or pass from the stage of children to that of "young persons," as defined by the Factory Acts. As it is, an immense number of children and young persons (over 375,000) are annually examined by the Certifying Factory Surgeons, and it will obviously be easy for the Factory Surgeon, when conducting his medical examination, to take the physical measurements decided upon. The Committee admit the need of scientific accuracy, but they hold that Certifying Surgeons and selected School Teachers may be relied upon to carry out definite instructions with the requisite care, and they are fortified in this belief by the declaration of Mr. Francis Galton in a communication to the Anthropometric Committee of the British Association, that "a vast deal of effort is wasted in minuteness of measurement."

56. While, then, they are in complete accordance with Professor Cunningham's view that the precise measurements to be taken can best be settled by the Consultative Committee referred to above, the Committee think that, as regards the actual survey, the main attack should be on the youth of the country. They recommend that two ages be selected at which every child in school attendance should be measured by a teacher or other officer selected by the Education Authority for the purpose, the particulars being recorded on a card provided by the Central Bureau. They recommend further that on every examination of a child or young person by a Certifying Surgeon the same particulars should be recorded. If this recommendation is carried out, the staff of professional Surveyors to be attached to the Central Bureau will be a limited one; their functions, important enough, being to advise where advice is sought in any quarter, or to check results where such a course seems called for at headquarters.

57. This recommendation will not militate against a more comprehensive and specialist survey, spread over a longer period, of the population of the country at large, or of definite districts. Indeed, the Committee are of opinion that such a survey will be of great value for the purpose of establishing and maintaining a standard for the guidance of the persons who may be engaged collecting *data* in schools and factories; and in an even higher degree for the purpose of obtaining statistics, based on careful sampling of various classes of the population, which shall serve as a standard of reference by which the results obtained in any particular case may be, in a sense, measured.

58. Allusion has been made to the probable difficulty of inducing the grown-up population to submit themselves in large numbers to an investigation; still, were the Bureau established and the Government thereby to indicate its interest in the work, the investigation would be placed upon a more favourable footing; the operations in the schools would familiarise people with the method, while there is a large number of associations or corporate bodies throughout the country who will probably co-operate readily enough. The following list

is not put forward as an exhaustive one, but illustrates the argument. First of all there are the Government offices, covering an immense number of employees, some of them including women as well as men : the Admiralty and War Office, General Post Office, Inland Revenue and Customs, Home Office, Board of Trade, Local Government Board, Board of Education, Civil Service Commission. Then there are County Councils and Municipalities, the Police, large manufacturers, hospitals, chambers of agriculture, trade unions and benefit societies, universities and public schools.

59. Insurance companies have not been included in the above list, since they stand upon a footing of their own, but special attention may be called to them as possibly a valuable source of information with regard to the physical characters of the adult population, could their cordial co-operation be secured. It should be easy to convince people that no secrets will be revealed : the record will not be one of names.

60. Finally, the Committee may here make a suggestion, in connection with their recommendations as to the medical examination of school children, that it should be a function of the Consultative Committee and the Central Bureau to standardize any tests used by local authorities, such as Education Committees, for testing the eyes, ears, or teeth.

61. The Committee have not thought it necessary to lay stress upon the scientific value of the results that will be obtained, but this is indicated in Cunningham, 2260-2 Prof. Cunningham's evidence ; it is perhaps needless to add that if these recommendations are accepted by the Government, the British Association will gladly see themselves superseded in the matter.

62. In addition to the Anthropometric measurements of the people, it appears to the Committee in the highest degree desirable that a co-ordinate record should be kept concerning the health of those sections of the people whose sickness is treated at the public expense. Of great value for some purposes are the Registrar General's Statistics concerning the mortality of the whole population without distinction of social status ; but, for the reason that no particulars are given on the latter point, these statistics are of little value in the present connection. However, as regards sickness that is not necessarily fatal, it appears that for many years past there has practically run to waste in this country an enormous mass of information, which, had it been arranged and analysed on suitable lines, would have been simply invaluable to the Committee at the present juncture. The records of sickness referred to are contained in the official returns of Poor Law Medical Officers, and also in the registers of the various hospitals and other charitable institutions throughout the country. And, as the Poor Law returns, at all events, relate exclusively to the very social stratum of the people among whom physical degeneration is most likely to occur, their value as a means of measuring the health of that stratum can scarcely be over-rated. Unfortunately, however, the official forms issued to Poor Law Medical Officers were designed for other purposes and without reference to the health of the paupers, and consequently, as may be seen by inspection, the information they contain is unsuitable for the purpose under consideration.

63. Many expert witnesses have acknowledged the importance that would attach to a properly classified record of sickness as complementary to the Anthropometric measurements now recommended by the Committee. As these returns are made weekly for every Poor Law district in the land, all that is required, in order to fit them for the purpose suggested, is that the forms of return should be modified accordingly. Inasmuch as these returns are required by the Central Authority as part of the routine duty of Poor Law Medical Officers, their modification in the manner suggested would be attended with little, if any, additional public expense. The Committee, therefore, strongly recommend that the assistance of the Local Government Board should be forthwith obtained, with a view to setting on foot and maintaining from year to year a register of sickness treated by the Poor Law Medical Services (not confined to infectious diseases) and by the other institutions mentioned. The Committee further believe that, with a view

Kerr, 838-842.
Anderson,
1557-1562.
Cunningham,
2417-2421.
Collie, 4014-6.
Hutchison, 10072-4.

to rendering the returns thus obtained serviceable for the purpose in hand, their tabulation and analysis might usefully be entrusted to the General Register Office, which possesses a staff and other machinery appropriate for the work.

64. The Committee also believe that in connection with the Anthropometric Survey, which they recommend, an Advisory Council might, with great advantage, be brought into existence, representing the Departments of State within whose province questions touching the physical well-being of the people fall, with the addition of members nominated by the medical corporations and others, whose duty it should be to receive and apply the information derived from the labours of the Bureau with the whole weight of Government authority and scientific prestige behind them.

65. It would be their function to advise the Government on all legislative and administrative points in respect of which State interference in these matters was expedient; to them might be remitted for consideration and report all the problems affecting public health which the requirements of a complex social organisation are constantly bringing to the front; and their advice would doubtless be useful in guiding the action of the official representatives of this country at the deliberations of any international Bureau of public health, such as that the establishment of which was favourably entertained by the recent Brussels Congress, and which has been the subject of discussion at later conferences.

66. By Article 25 of the recent French law of Public Health (*Loi du 15 Fevrier, 1902*) *Le Comité consultatif d'hygiène publique de France* was constituted and invested with specific duties towards the Government and the local administration. Its composition, which is of a very representative character, will be found in the Appendix. To this Committee, with its seat at Paris, all the local Councils look for guidance and regulation. By these means the sanitary administration of the whole country receives a uniform impulse, and the best resources of the State in matters of public health are placed at the service of the humblest administrative unit.

Appendix X.

PART II.

I. INTRODUCTORY.

67. It has now been seen that there are no sufficient *data* at present obtainable for a comparative estimate of the health and physique of the people, and the Committee have indicated the measures that, in their opinion, should be adopted in order to supply the want, but before concluding their task they deemed it their duty, under the fuller explanation of their commission, by which their Order of Reference was supplemented, to consider the causes and conditions of such physical degeneration as is no doubt present in considerable classes of the community, and to point out the means by which, in their opinion, it can be most effectually diminished, and more especially to discuss this aspect of the question as it affects the young during the three periods of infancy, school age, and adolescence.

68. It may be as well to state at once that the impressions gathered from the great majority of the witnesses examined do not support the belief that there is any general progressive physical deterioration.

69. The evidence of Dr. Eichholz contains a summary of his conclusions on this point, so admirably epitomising the results of a comprehensive survey of the whole subject, that the Committee cannot do better than reproduce it in full at this stage of their report:—

"(1) I draw a clear distinction between physical degeneracy on the one hand and inherited retrogressive deterioration on the other. (2) With regard to physical degeneracy, the children frequenting the poorer schools of London and the large towns betray a most serious condition of affairs, calling for ameliorative and arrestive measures, the most impressive features being the apathy of parents as regards the school, the lack of parental care of children, the poor physique, powers of endurance, and educational attainments of the children attending school. (3) Nevertheless, even in the poorer districts there exist schools of a type above the lowest, which show a marked upward and improving tendency, physically and educationally—though the

Eichholz, 435.

rate of improvement would be capable of considerable acceleration under suitable measures. (4) In the better districts of the towns there exist public elementary schools frequented by children not merely equal but often superior in physique and attainments to rural children. And these schools seem to be at least as numerous as schools of the lowest type. (5) While there are, unfortunately, very abundant signs of physical defect traceable to neglect, poverty, and ignorance, it is not possible to obtain any satisfactory or conclusive evidence of hereditary physical deterioration—that is to say, deterioration of a gradual retrogressive permanent nature, affecting one generation more acutely than the previous. There is little, if anything, in fact, to justify the conclusion that neglect, poverty, and parental ignorance, serious as their results are, possess any marked hereditary effect, or that heredity plays any significant part in establishing the physical degeneracy of the poorer population. (6) In every case of alleged progressive hereditary deterioration among the children frequenting an elementary school, it is found that the neighbourhood has suffered by the migration of the better artisan class, or by the influx of worse population from elsewhere. (7) Other than the well-known specifically hereditary diseases which affect poor and well-to-do alike, there appears to be very little real evidence on the pre-natal side to account for the widespread physical degeneracy among the poorer population. There is, accordingly, every reason to anticipate RAPID amelioration of physique so soon as improvement occurs in external conditions, particularly as regards food, clothing, overcrowding, cleanliness, drunkenness, and the spread of common practical knowledge of home management. (8) In fact, all evidence points to active, rapid improvement, bodily and mental, in the worst districts, so soon as they are exposed to better circumstances, even the weaker children recovering at a later age from the evil effects of infant life. (9) Compulsory school attendance, the more rigorous scheduling of children of school age, and the abolition of school fees in elementary schools, have swept into the schools an annually increasing proportion of children during the last thirty years. These circumstances are largely responsible for focussing public notice on the severer cases of physical impairment—just as, at a previous stage in educational development, they established the need for special training of the more defined types of physical deficiency—the blind, the deaf, the feeble-minded, and the crippled. (10) The apparent deterioration in army recruiting material seems to be associated with the demand for youthful labour in unskilled occupations, which pay well, and absorb adolescent population more and more completely year by year. Moreover, owing to the peculiar circumstances of apprenticeship which are coming to prevail in this country, clever boys are often unable to take up skilled work on leaving school. This circumstance puts additional pressure on the field of unskilled labour, and coupled with the high rates of wages for unskilled labour, tends to force out of competition the aimless wastrel population at the bottom of the intellectual scale, and this, unfortunately, becomes more and more the material available for army recruiting purposes. (11) Close attention seems to be needed in respect of the physical condition of young girls who take up industrial employment between the ages of fourteen and eighteen. The conditions under which they work, rest, and feed doubtless account for the rapid falling off in physique which so frequently accompanies the transition from school to work."

70. Testimony is almost unanimous as to the improving conditions under which the denizens of large towns are called upon to exist. Rookeries are being dispersed, enclosed yards opened out, cellar-dwellings and back-to-back houses are disappearing. One-roomed, two-roomed, and three-roomed tenements, with more than two, four, and six occupants respectively are diminishing; the figures for the years 1891 and 1901 under each class in the Administrative County of London and in Lancashire are as follows:—

—	One-roomed tenements with more than two occupants.		Two-roomed tenements with more than four occupants.		Three-roomed tenements with more than six occupants.	
London . . .	1891 56,727	1901 40,762	1891 55,020	1901 50,304	1891 24,586	1901 23,979
Lancashire . . . (Administrative County, together with 15 County Boroughs)	5,007	4,256	16,004	10,277	8,704	6,437

from which it appears that the rate of improvement has been more marked in London in regard to the overcrowding of one-room tenements, and in Lancashire in respect of the other two classes. With an increase of wages a fall in the prices of food, coal, and clothing has taken place, more than counterbalancing the rise in rent, which, in itself, is largely due to the higher wages paid in the building trade.

71. Mr. C. S. Loch, in his interesting evidence, furnished the Committee with reasons for believing that improved resources have been accompanied by an upward movement in social ability or competence, with the result that a certain amount of advantageous expenditure has gone in better houses, and in the purchase of more food, and of food particularly good for children, and he also thought the same conclusion might be drawn from the large decrease in child pauperism.

72. Further, the water supply has been enormously improved, both in purity and quantity; legislation has greatly extended the liabilities of

owners and occupiers under the Public Health Acts and the Housing Acts, and under the said series of Acts wide powers have been placed in the hands of local authorities for cleansing unhealthy areas, closing insanitary houses, preventing overcrowding, abating nuisances and enforcing generally a higher standard of sanitation ; machinery exists for the inspection and purification of cowsheds and dairies, pauperism has diminished, better and more complete accommodation is provided for the sick poor, the conditions of labour touching young persons and women, in factories and workshops, have been greatly ameliorated, and all the children of the State in workhouse schools, reformatories and industrial institutions, are started in life under far better auspices than formerly.

73. On the other hand, in large classes of the community there has not been developed a desire for improvement commensurate with the opportunities offered to them. Laziness, want of thrift, ignorance of household management, and particularly of the choice and preparation of food, filth, indifference to parental obligations, drunkenness, largely infect adults of both sexes, and press with terrible severity upon their children. The very growth of the family resources, upon which statisticians congratulate themselves, accompanied as it frequently is by great unwisdom in their application to raising the standard of comfort, is often productive of the most disastrous consequences. "The people perish for lack of knowledge," or, as it is elsewhere put, "lunacy increases with the rise of wages and the greater spending power of the operative class ; while a falling wage-rate is associated with a decrease of drunkenness, crime, and lunacy." Local authorities, moreover, especially in the rural districts, are often reluctant to use their powers, and in these circumstances progress, unless stimulated by a healthy public conscience in matters of hygiene, is slower than might be wished.

74. An apt illustration of the widely different views held by competent observers is afforded by the interesting evidence of Mr. J. B. Atkins, London Editor of the *Manchester Guardian*, who, with a view to investigations of his own on the subject, has collected a large body of testimony, some of which he was good enough to lay before the Committee, showing in immediate juxtaposition what may be perhaps best described as the empirical and statistical methods of arriving at a conclusion.

Appendix XXVII, 7

Atkins, 2863-3122.

75. The operation in different directions of the aforesaid ameliorative tendencies, and of the influences that incline towards the arrest of progress, combined with the spread of education, has, as Dr. Eichholz pointed out, had the effect of stratifying the population and concentrating the classes that require special treatment :

"There is an upper class, well-to-do and well cared for, to whom our methods afford every chance of mental and physical improvement. They come out well, and furnish a population probably not excelled by any in this country or in any other. At the other end of the scale we find the aggregation of slum population, ill-nourished, poor, ignorant, badly housed, to a small extent only benefited by our methods of training. They are the degenerates for whom this enquiry is presumably instituted. Between these two is the third and largest stratum consisting of the average industrial artisan population in which the breadwinners are in regular employment. It is the aggregation of the slum population which is largely responsible for the prominent public notice called to their physical condition."

Eichholz, 429.

76. In a similar vein, Dr. R. J. Collie, one of the medical staff of the late London School Board, says—

"Physical infirmity is practically confined to the poorest and lowest strata of the population, whose children are improperly and insufficiently fed and inadequately housed, and where parents are improvident, idle, and intemperate."

Collie, 3907.

77. If this be so, as the Committee are inclined to think, the task of dealing with a concentrated rather than a scattered evil manifestly presents fewer physical difficulties.

78. The Committee have advisedly abstained from framing an estimate of the number of persons living under depressed conditions on the basis of the calculations made by Messrs. Booth and Rowntree. First, they have not the

Booth, "Life and Labour in London."
Rowntree, "Poverty."

Appendix III.

means of doing so; and, secondly, the different estimates of the number of underfed children, which they have had to consider, seem to show that there must be some very variable element which interferes with the acceptance of such conclusions as resting on generally accepted *data*. It may be stated also that Mr. Loch, in the course of his evidence, questioned the method on which the calculations leading to these conclusions had proceeded, and he subsequently put in a Memorandum explaining the grounds of his dissent. This Memorandum, which confirms the Committee in the belief that the matter is attended with great difficulty, will be found in the Appendix, and is a valuable contribution to the literature on the subject.

II.—URBANIZATION OF THE PEOPLE.

79. Turning to the general causes in operation that are calculated to arrest and depress development, the collection of the majority of the population in the large towns is the most evident and most considerable; but even here the evil is not so great as the form in which it is commonly stated might suggest.

80. According to the classification adopted in the Census returns for England and Wales the urban population is 77 per cent. of the whole, whereas fifty years ago it was only just over 50 per cent. It is the fact that for every person who in 1851 lived in a town, about three are so situated at the present time, but it must be remembered that the term "urban" merely means those districts that for the purposes of local administration have an urban organization, and that a large portion of the urban population is living under conditions as healthy as any that obtain in rural districts, and indeed enjoys superior advantages, owing to the greater completeness of sanitary legislation for such areas, and the higher conception of duty that governs their administration. Further, it is the case that towns have now a death-rate which is lower than was that of rural districts fifty years ago.

81. If a comparison could be made between the numbers living in slum quarters now and in the middle of the last century there might be some nearer approach to an effective conclusion as regards the results of urbanization, making due allowance for the improvement of life, even under the most degraded conditions, that has undoubtedly taken place. To this fact both Drs. Chalmers and Niven, Medical Officers of Health for Glasgow and Manchester respectively, testify on the strength of the evidence supplied by the vital statistics touching such quarters. In opposition to such testimony it is not sufficient to say, as one witness did, that he attaches little importance to an improvement of vital statistics, because it is simply raising an inferior limit. The theory that the processes by which life is preserved are themselves a cause of degeneration, by prolonging the lives of the unfit, is open to the criticism that of all the discriminating agencies to produce the survival of the fittest disease is the worst, for the injury to those that survive is so serious that all measures which combat disease tend to improve the race. But be the circumstances what they may on this point, there is reason to fear that the "urbanization" of the population cannot have been unattended by consequences prejudicial to the health of the people, and these have been considered under the three heads of (i.) *Overcrowding*, (ii.) *Pollution of the atmosphere*, and (iii.) *The conditions of employment*.

i. *Overcrowding*.

82. Overcrowding still stands out most prominent with its attendant evils of uncleanness, foul air, and bad sanitation.

83. The problem is by no means a new one, however its conditions may have become aggravated in recent times. So long ago as the year 1598 the Privy Council addressed a letter to the Justices of Middlesex, inveighing against the owners of tenement houses for the abuses they encouraged; "the remedie whereof cannot be sufficientlie provided in havinge an eye to these persons that take those howses, beinge so great a nomber, and they cannot

Chalmers, 5250.
Niven, 6273.

Rees, 4240.

Maurice, 293.

be justlie corrected untill they be taken with some offence, but in severe punyshinge those landlords that lett out those small tenements (parcells of howses and chambers) unto unknowne and base people and from weeke to weeke, not regardinge what the persones are that take the same, but to rayse a vile and unconscionable lucre."

84. This is not quite the official language of the present day, but among the opinions collected by the most modern investigator occur the following:

Booth : "Life and Labour in London."

"Overcrowding is the great cause of degeneracy"; "Drink is fostered by bad houses"; "Crowded homes send men to the public-house"; "Crowding the main cause of drink and vice."

85. The permanent difficulties that attach to the problem reside, as the same witness has shown, in the character of the people themselves (their feebleness and indifference, their reluctance to move, and their incapability of moving), and in the obstacle this presents to the best directed efforts on the part of the local authority to employ their powers.

Booth, 891.

86. It has been suggested that interference "by administrative action and penalties at each point at which life falls below a minimum accepted standard" is the way by which the problem must be approached, and the occupation of overcrowded tenements seems to afford the best opportunity for the application of the doctrine. The evil is, of course, greatest in one-roomed tenements, the overcrowding there being among persons usually of the lowest type, steeped in every kind of degradation and cynically indifferent to the vile surroundings engendered by their filthy habits, and to the pollution of the young brought up in such an atmosphere. The general death-rate in these tenements in Glasgow is nearly twice that of the whole city, and the death-rate from pulmonary tuberculosis is 2·4 per thousand in one-roomed tenements, 1·8 in two-roomed tenements, and .7 in all the other houses. In Finsbury, again, where the population of one-roomed tenements is 14,516, the death-rate per thousand in 1903 was 38·9, yet the rate among occupants of four or more rooms was only 5·6, and for the whole borough 19·6. Similarly a comparison between the population of Hampstead and Southwark, in respect of their ability to withstand disease and death, shows an expectation of life very largely in favour of Hampstead, at birth the relative figures being 50·8 and 36·5 years, at five, 57·4 and 48·7, illustrating the waste of material during the first years of life. From another table, furnished by Mr. Shirley Murphy, the Medical Officer of Health for the administrative County of London, it appears that in seven groups of districts with an increasing amount of population living in overcrowded tenements the infant death-rate has followed the increase; that is to say, in districts with under 10 per cent. of the population living under these conditions the death-rate was 142 per thousand, and then, as the proportion of people living in overcrowded tenements increases, so does the infant death-rate, going from 180 to 196, and then to 193, and then going on to 210, 222 and 223.

Chalmers, 5991.

Chalmers, 6022.

Hawkes, 12952.

Murphy :—Appendix XIII.

Appendix XIII.

87. Facts like these show where the root of the mischief lies, and surely the time is ripe for dealing drastically with a class that, whether by wilfulness or necessity, is powerless to extricate itself from conditions that constitute a grave menace to the community, by virtue of the permanent taint that is communicated to those that suffer under them, and of the depressing effect that the competition of these people exercises on the class immediately above. The Committee think that with a view to setting a term to these evils the Local Authority should, in the exercise of their power to treat "any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates" as a nuisance, and for the abatement of the same, notify that after a given date no one-roomed, two-roomed, or three-roomed tenements would be permitted to contain more than two, four or six persons respectively. The change might be brought into operation gradually, so as to treat the worst cases first, and render it easier to provide for the displaced families, but in every case handled it must be made plain that in the event of non-compliance recourse would be had to the compulsory closing of the tenement in question.

88. The problem of dealing with the persons affected would have to be faced, but this could be done with more confidence seeing that the difficulty involved is a terminable one and that security would be taken against a reproduction of the conditions that rendered action of the kind necessary. In this connexion Mr. Loch strongly advocated the firm grasp of the nettle. By taking the worst centres firmly and sternly in hand he believed in a piecemeal solution of the whole problem, and instanced the readiness with which in old days common-lodging-houses grew up with an increasing demand on the part of their *clientèle*, as showing how very instantaneous the supply would be when the demand was clearly expressed. The fact of these lodgings-houses being now under the control of the County Council would greatly facilitate the process. Means would probably be found through the ordinary channels of supply and demand or within the sphere of municipal activity for housing all but the irreclaimably bad, and in the last resort the State acting in conjunction with the Local Authority would have for its own sake to take charge of the lives of those who, from whatever cause, are incapable of independent existence up to the standard of decency which it imposes.

Chalmers 6004-6013.
Cameron 11024-
11034, 11070-4.
Ormsby 12593-5.
1260-95.

Lamb, 11483-11504,
11669-11674.

89. "Colonel" Lamb, of the Salvation Army, was favourable to the adoption of similar methods, and suggested as an experiment the concentration on selected areas of every available agency for social reform, putting in a resident magistrate to enforce the law, which he believed was sufficient for the purpose, especially if the work of voluntary agencies were directed to the same end.

90. Some such expedients as have been suggested for disposing of habitual vagrants might also be adopted; the Committee are not prepared to indicate the exact lines upon which these ought to be modelled; a large latitude should probably be left to each locality in healing its own sores, but as a last resource compulsory detention in labour colonies would have to be resorted to, and the children of those made the subject of this experiment lodged in public nurseries, until their parents were improved up to the point at which they could resume charge.

Lamb, 11554-11786

91. The Committee took the evidence of "Colonel" Lamb, on the colony managed by the Salvation Army at Hadleigh, and paid the colony itself a visit of inspection, in the course of which they were much impressed by the order which prevailed in every branch of its administration, and by the opportunity the system appears to offer for the reclamation of some of the waste elements of society. They also had the advantage of reading the valuable Report of the Vagrancy Committee of the Lincolnshire Court of Quarter Sessions for Parts of Lindsey upon the colonies of the kind established in Belgium, and they consider that with proper co-operation between county authorities such colonies might usefully form an integral part of local administration.

92. A system of this sort once established and tested, it might not be impossible, having regard to the interest the community possess in the preservation of the young from contaminating and depressing influences, to apply similar treatment to the children of all parents who have proved unfit to discharge their obligations to those they bring into the world. With a view to the enforcement of parental responsibility the object would be to make the parent the debtor to society on account of the child and to empower the local authority to charge the former with the cost of a suitable maintenance, with the further liability in case of default of being placed in a labour establishment under State supervision, until the debt is worked off. It is not believed that any such extreme steps would be necessary in a very large number of cases; the fact of a few being so treated experimentally and the knowledge that the State had and might wield such power would exercise a most salutary effect in bringing home to parents the nature and extent of their liabilities, and might be expected to prove to the young a charter of immunity from the most crying evils by which they are at present oppressed.

93. It has been suggested that the system of municipal institutions prevailing in this country, under which the chief officers are elected annually, is not calculated to produce the vigilance and ability displayed in dealing with these problems in Germany, where the corresponding officers hold a more or less permanent position. This was the view of one very competent witness, Mr. T. C. Horsfall, who also advocated the adoption of what is known as the Elberfeld system, under which any citizen can be called upon by the municipality to act upon their behalf in much the same capacity as an officer of the Charity Organisation Society does in this country, and become the channel for the district under his charge of all information required by the Local Authority on matters touching the health of the people. In this way it is contended that a high standard of civic duty is inculcated, and the public conscience moved to reprobate social wrongs. On the other hand, a representative civic officer like Dr. Niven, of Manchester, declared that with the present machinery improvement was as rapid and well sustained as it was reasonable to expect, and many of those who were most impressed with the evils they saw around them took the view that they were the results of conditions which had in great measure been superseded, and that the course of the next few years would show a most decided amelioration.

Horsfall, 5629-5658.

Niven, 6280-2.

Booth, 1140-3.
Rowntree, 5194-5,
5248.
Loch, 10183-4.

94. In one respect Mr. Horsfall was able to show that an immense superiority rested with Germany. In England no intelligent anticipation of a town's growth is allowed to dictate municipal policy in regard to the extension of borough boundaries, with the result that when these are extended the areas taken in have already been covered with the normal type of cheap and squalid dwelling houses, which rapidly reproduce on the outskirts of a city the slum characteristics which are the despair of the civic reformer in its heart.

95. In some parts of Germany a different system appears to prevail. As soon as the original nucleus of a town has reached certain proportions, a broad zone with lungs something like the points of a star is drawn round it; within the zone and the avenues leading outward no population beyond a certain very limited density is allowed, and the increase of the town on the scale of population permitted in the centre is pushed back beyond this zone. No such town, therefore, in Germany, however large, would be without its proportion of open space in the immediate vicinity, and the lungs or avenues provide for the indraught of a due quantity of fresh air into the very heart of the city. Notwithstanding these precautions, the urbanization of the German people has been attended with some falling off in the physical characters of the conscript. Thus in the seven years between 1894 and 1901 the returns show that the fit have fallen 1 per cent., the unfit risen 1·3 per cent.

Shadwell:—
Appendix XIV.

96. It must be remembered, in defence of our laxity in this respect, that the industrial development of Germany took place fifty years later than ours, when sanitary science with its multiform applications to the actual conditions of urban existence had come to be much better understood and practised, and that here we do not start *de novo*, but have in a large measure to undo the consequences of previous neglect.

97. In this connection it would be expedient to secure the co-operation of Local Authorities in contiguous areas that are becoming rapidly urbanized.

98. The means to be adopted are, no doubt, in the main palliative, but their combined effect may be none the less considerable. It has already been indicated how, by the gradual pressure of hygienic law and disciplinary penalties, the impetus of improvement may be given to the people themselves, and however slowly municipal action is compelled to move towards the extirpation of social ills, it can and must provide against their reproduction in areas over the development of which it is not too late to watch.

99. A prescient sense of the conditions to be fulfilled and heedfulness towards the consequences of their neglect may surely be exercised in all cases,

when the extension of borough boundaries offers an opportunity for the laying out of new urban quarters. The vigilant enforcement of proper building regulations, which should include the maintenance of airways of sufficient breadth towards the centres of large towns, and arrangements for their being properly planted with, if possible, two rows of trees on either side ; the determination to bring home to both landlord and tenant the duty of maintaining a minimum standard of decency and comfort ; the provision of cheap means of transit on a comprehensive scale between the outgrowths and centres of large towns ; and possibly some revision of the basis of local taxation, whereby sites should figure more largely than buildings in framing assessments, with the consequent probable removal of large industrial concerns to less costly surroundings, might all in their several degrees tend to amelioration.

ii. Pollution of Atmosphere.

100. The attention of the Committee was prominently called to the effect on public health of the pollution of the atmosphere.

101. In dealing with the Manchester district one witness said—

“The pollution of the air is worse than ever.” “I should trace much of the anaemia to the deprivation of sunlight and to the lessening of the vivifying qualities of the air.” “You have execrable air for the people to breathe.”

Another gave similar testimony—

Horsfall 5580.

“The condition of the air by its direct effect on lungs and skin is the cause of much disease and physical deterioration. By cutting off much of the scant supply of sunlight which is all that Manchester at best would be allowed by its gloomy climate to receive, it injures health.” “The filthiness of the air makes those inhabitants of all parts of Manchester who value cleanliness most unwilling to ventilate their dwellings.” “By killing nearly all vegetation and by its other effects, the foulness of the air contributes much to that general gloominess of the town which led Mr. Justice Day to say in explanation of the prevalence of drunkenness in the town, that to get drunk ‘is the shortest way out of Manchester.’”

Horsfall 5580.

102. To this influence is attributed the removal of all well-to-do persons from the town, which the same witness stated to be a most fruitful cause of the ignorance and bad habits of the poor, and of the failure on the part of the authorities to take sufficient cognizance of those districts in which the poor are congregated without admixture of other classes.

Rees 4266-4282,
4309-4317, 4448-
4456.
Horsfall, 5602-4,
5580.
Niven 6457-8.

103. The chief causes of this pollution are alleged to be the non-enforcement of the law for the prevention of smoke from factories, the imposition of inadequate penalties, the neglect to limit works which produce noxious vapours to special areas where they can be closely supervised and so do the least possible amount of harm; and lastly, the absence of any provision in the law compelling the occupants of dwellings to produce the least possible quantity of smoke.

Rees 4234-7.
Horsfall 5582-5591,
5608-9.

104. On the point of prosecutions, it was stated that there are people in Manchester who systematically pollute the air and pay the fine, finding it much cheaper to do so than to put up new plant. The trial of such cases before benches of magistrates composed of manufacturers or their friends creates an atmosphere of sympathy for the accused, and it was alleged that magistrates who had sought to give effect to the law encountered the indifference and sometimes the positive opposition of their colleagues. It was explained that although careless stoking is often responsible for the evil, the production of smoke is really the result of overdriven furnaces ; with adequate room for boiler and furnace, and a well paid fireman under careful supervision, smoke can be prevented without any special appliances, but the greater part of the smoke is produced by furnaces that are too small for their work.

105. It is admitted, however, that a stricter enforcement of the law and a change in legislation, giving higher penalties, would produce a great improvement without imposing any serious burden on manufacturers.

The Committee think that cases of the kind should come before a stipendiary magistrate, and that it should be considered whether the responsibilities of the ordinary householder in regard to domestic smoke prevention might not also be dealt with gradually but firmly, as they understand is the case in Germany, for his present immunity from interference is said to produce a feeling of inequality that increases the reluctance to put the law in motion against the offending manufacturer.

Horsfall 5592-4.

LOCAL ADMINISTRATION.

106. These questions of air pollution and overcrowding raise directly the issue of the efficiency of local administration, and evidence of considerable variety was taken on this point. On the whole, it appears that the urban areas enjoy the greater advantage in this respect. Direct testimony was forthcoming that many local authorities are setting an example of persistent devotion to a high standard of civic duty, and others that for years were slack or indifferent are now said to have awakened to a sense of their responsibilities. Thus, in regard to the worst district in Manchester, Dr. Niven, the Medical Officer of Health for that city, stated—

"The conditions with regard to housing are very greatly improved. The majority of the worst type of houses have been entirely cleared away and a great many courts have been opened out. . . . Altogether, there has been a very great improvement in the condition of the houses in Manchester." Niven 6279.

107. It is admitted, however, that there are still 3,000 back-to-back houses in the city, and in the centre 206 common lodging-houses, which are described as insanitary, containing 5,831 inhabitants. Niven, 6324.

108. Again, Dr. Young, President of the Association of Certifying Factory Surgeons, presented the Committee with a body of reports collected from a large number of his colleagues confirmatory, as a whole, of the same view. Dr. Young is himself connected with Liverpool, and testifies very favourably to the work done by the municipal authorities in that city. Reports from Preston, Wolverhampton, and Sheffield tell the same tale in varying degrees, though in regard to the last named, evidence, to be mentioned later, shows that the awakening has been somewhat tardy. In Glasgow, where a generation ago the conditions of existence were perhaps harder and more depressing than in any other town in Great Britain, there is great improvement to record. In the opinion of Dr. Scott, Certifying Factory Surgeon in that city, the Corporation have done their very best. Rickets, which had reached terrible proportions twenty years ago, has been reduced, owing to the improvement effected in the conditions under which people now live. Dr. Chalmers, Medical Officer of Health in the same city, attributed to this improvement an increase in the expectation of life and, by implication, in the standard of vitality, and added that without the one-roomed house difficulty the death rate would be something like 18 or 19 per 1,000. "One talks" he said "of insanitary areas at the present moment, but although it is the same phrase, it means something different from what it did thirty years ago." What was wanted, he believed, was a concentration of attention on the population which has fallen below all reasonable standard of living. In regard to the pollution of the air by smoke and noxious vapours, he declared that a vigorous application of the Acts was systematically made.

Young, passim.

Young, 2082-2088.

Scott, 1675.

Chalmers, 5986.

Chalmers, 6019.

Chalmers, 5947.

Chalmers, 6134.

Chalmers, 6215.

109. Mr. Shirley Murphy explained the steps taken in London to ensure the enforcement of the bye-law, which under Section 94 of the Public Health (London) Act prescribes the number of cubic feet which each individual should have, but as the enforcement of this bye-law is primarily in the hands of the Borough Councils, its application is varying and irregular. The standard of 300 feet for a room occupied at night only, and 400 for a room occupied by night and day, is so low that in Mr. Murphy's opinion it ought to be enforced rigidly throughout London, and

Murphy, 9383-9398.

to that end he stated that the County Council had been making very considerable efforts for a number of years, as it was a point to which they attached great importance. They have also done something towards the provision of dwellings and the clearance of insanitary areas, while their control of the common lodging houses has resulted in a marked improvement in the standard of living noticeable in those establishments, as the Committee can testify from a personal inspection of a considerable number.

110. On the other hand, Tyneside, Dundee, Edinburgh, the Staffordshire Potteries, and to some extent Sheffield, were mentioned as districts which in whole or in part had suffered from the neglect of the local authorities to deal with glaring evils. Dr. Neston, of Newcastle, says—

Young, 2082.
 “There is undoubtedly great deterioration in the physique of our City population, and this is attributable to two chief causes, first a decadence in home life, which entails improper food and clothing, irregular habits (drinking and gambling), absence of order and thrift ; second, the miserable housing and high rents which prevail ; overcrowding, with its consequences, is an important factor in physical and mental degeneration. The fathers and mothers of the rising generation do not recognise, in their gravity, the obligations of paternity, which are left to the authorities, educational or parochial. There is an undoubted falling off in the physical condition of the infants vaccinated, and young persons presented for employment during the last quarter of a century, and this is due to the fact that they are the offspring of town-bred parents, who produce *sui generis*.”

111. Mr. Harry Wilson, an Inspector of Factories, says—

Wilson, 1935.
 “Personally the poorest specimens of humanity I have ever seen, both men and women, are working in the preparing and spinning departments of certain Dundee jute mills.”

In reply to a question as to the sort of tenements these people occupy, he says—

Wilson, 1940-1.
 “There are a great number of single-room and two-room tenements in Dundee, and big blocks having no privy accommodation at all except a common one in the yard.”

Wilson, 1942-4.
 Next to no effort had been made to improve this state of things.

Mackenzie, 6923.
 Mackenzie, 7036-7.
 Mrs. Mackenzie, 7038, 7040.
 Mackenzie, 6842.
 Greenwood, 8106-9.
 Greenwood, 8110, 8116, 8120.
 Greenwood, 8138.
 Greenwood, 8233.
 Greenwood, 8111, 8143.

112. In certain districts of Edinburgh no less than 45 per cent. of the population, according to the information given by Dr. Leslie Mackenzie, Medical Inspector to the Local Government Board for Scotland, live in one-roomed or two-roomed dwellings, a fact which largely accounts for the sinister results attending the examination of the 600 children conducted by Dr. Mackenzie, under the direction of the Royal Commission on Physical Training (Scotland). In the district from which many of these children were drawn—the North Canongate—Mrs. Mackenzie, who assisted her husband at the aforesaid survey, told the Committee that 76 per cent. of the population lived under these conditions, and in these one or two-roomed dwellings there are often seven, eight, or nine children, besides the father and mother. To the question whether the City Council of Edinburgh has taken action, the witness replied, “Individual cases do not come within their purview until some one complains ;” and to the further question, whether they took any steps to inform themselves of such abuses, the answer was “I do not know.” If this is at all a correct representation of the case, the statement of Dr. Mackenzie, that “Where the neglect of duty is a specific thing having relation to specific conditions, such as overcrowding or special nuisances,” the powers of the Local Government Board are complete, is eloquent of a double neglect.

113. As to Sheffield, Mrs. Greenwood, one of the Sanitary Inspectors in that place, described the drainage as bad, many rubble sewers being still in existence, and the sanitary conditions shocking in respect of a large number of unpaved courts which receive the contents of the middens, and are therefore saturated with filth. There are also a large number of unwholesome dwellings, no fewer than 15,000 on the back-to-back system, most of them with no more than three rooms, and sometimes occupied by eight, ten, or even twelve persons. Therefore, it is not surprising to hear that “the number of deformed people is something terrible,” and that infant mortality goes up in one district to 234 per 1,000. Referring to the action of the municipality, Mrs. Greenwood said, “They are very much behind the times,” and she thought they had only been awakened to activity by serious outbreaks of infectious disease. As an instance of dilatoriness, she mentioned

one insanitary area for which a provisional order was obtained fifteen years ago, and which is not cleared yet. There is certainly an improvement, sh
added, during the last five years, but even now the building bye-laws are not as stringent as they ought to be, and, in the opinion of a great many, the Corporation are not pushing on things as they ought.

Greenwood, 8131.
Greenwood, 8154,
8129.

114. The severest exposure of neglect was given by Miss Garnett, the head of a settlement of philanthropic ladies in the Staffordshire Potteries. According to her evidence, more than two bedrooms in a house are rarely to be found in that district, and these houses are sometimes occupied by eight adults. "I should think," she said, "the local authority in the Potteries was as inefficient as you could find anywhere." Most of the bad houses are owned by members of the local bodies, and the sanitary inspectors are too much in awe of their employers to carry out their duty. The only hope of a change, short of a drastic interference from headquarters, lay, in her opinion, in a registration of the owners of slum property and the rendering the Medical Officer of Health independent of the local authority. The normal type of municipal organization was, as has been stated, criticised by one witness as deficient in the elements of good government, owing to the fact that the principal officer was the creation of annual election, whereas in Germany local administration was treated as a profession; but looking to the excellent results that are obtained in certain places, it would seem that it is not so much the instrument that is in fault as the impulse behind it.

Garnett, 9087-8.

Garnett, 9096.

Garnett, 9130,
9147.

Horsfall, 5629.

115. It is, moreover, often forgotten that police control, which in Germany is the saving factor of the position, is there much stronger than in this country: a fact which is largely attributable to compulsory military service, the disciplinary effect of which touches every point of administration.

116. The reluctance to incur necessary expenditure, insensibility to the pressing nature of the evils themselves, and the difficulties inseparable from any serious effort towards their removal, are the main causes of the neglect which the Committee have noticed. In some cases the interests of manufacturers and property owners have been alleged to interfere with the proper exercise of the functions of local administration, and behind the whole system there is no sufficient driving power to secure that adequate pressure shall be brought to bear on the careless or indifferent.

117. It has been represented to the Committee that one of the first *desiderata* towards dealing with slum property is an accurate register of owners, and there seems no reason why in all towns above a certain size it should not be the duty of the local authority to make and preserve such a register.

Garnett, 9142-7.

118. Another change which might effectually reinforce the cry for improvement in many places would be to grant security of tenure to the Medical Officers of Health, who as a rule hold office at the goodwill of the Local Authority. Such security is enjoyed in Scotland and in London, and the Committee, who had the advantage of hearing the evidence of Mr. Lithiby, Assistant Secretary of the Local Government Board, on the point, think that in no case, unless convicted of misconduct, should a Medical Officer of Health, not engaged in private practice, be removed without the consent of the Local Government Board, and that in all areas above a certain population he should be required to give his whole time to the work.

Rowntree, 5237-5241.
Horsfall, 5630-3.

Niven, 6465-6474,
6485-6493.

Fosbroke, 6721-4.

Garnett, 9095-7,
9136-9141, 9176-9,
9310-3.

Lithiby, 13489-
13527.

119. It appears, moreover, that the chain of responsibility should be made more complete, so that minor authorities, if notoriously negligent, might be superseded by some superior body with a wider outlook and a more sensitive sanitary conscience. In London a power resides with the County Council to step in upon neglect of the Metropolitan Borough Councils to discharge their duties under any part of Part II. of the Housing Act, 1890, and the Committee think it would be expedient if in certain circumstances County Councils were empowered, after a reference to the Local Government Board, to act in default of any urban (other than a municipal borough) or rural sanitary authority within the area of their

Ashby, 8823-6.
Loch, 10285-8.

administration, for all purposes of this Act and the Public Health Acts. To this end it would be necessary to amend the Act of 1888, by rendering it obligatory on every County Council to appoint a Medical Officer of Health, who should be required to give his whole time to the work.

120. It remains to be considered whether, apart from direct representations on the subject which might call for special examination, any general criterion of neglect ought to be laid down, the fact of which should make it the duty of the higher authority, either local or central, to intervene.

^{Loch, 10258.} 121. On the establishment of an anthropometric survey, the disclosure of any marked declension in physical characters might be one such criterion, an abnormal death rate continued for two or three years or the recurrence of serious epidemics might be another; but the Committee are inclined to view with particular favour a suggestion of Mr. C. S. Loch, that the local sanitary authority should be made to furnish information according to specified requirements, which would show what was being done or left undone in the matter of sanitation, and the administration of the law relating to overcrowding and so on. Mr. Lithiby, it is true, stated that, according to the present practice, returns were made by the Medical Officer of Health, which often led to enquiry and the rectification of gross abuses, but the Committee think that the responsibility of the local administration in this regard ought to be emphasized, and consider Mr. Loch's proposal a useful one from that point of view.

122. The particulars required for the purpose of such a return might include the infant death rate, the number of cellar and back-to-back houses, an enumeration of one-roomed, two-roomed and three-roomed dwellings, with the tale of occupants in each dwelling, and the minimum amount of cubic feet allowed for each person, the character of the water supply and sewerage arrangements, and the means for the disposal of refuse, and any cognate matters, information on which would afford a clue to the character of the administration.

123. No reasonable objection could be taken if on a comparison of the returns a gradual effort was made to screw up the efficiency of local government to the standards of its best exponents in town and country. As Mr. Loch said elsewhere—

^{Loch, 10171.} "There are many conditions for the prevention of which a local authority is working and in regard to which a central authority could do a great deal to assist. It can inspect and it can work on the natural method of promoting good conditions by the process of imitation."

And he went on to urge—

^{Loch, 10174-5} "That possibly by a more systematic application of the law on definite lines, in conjunction with the support of the central authority, the staff work could go very much further";

and in certain directions he would look for valuable volunteer help, as for instance in the form of sanitary visitors.

124. The public health is obviously a question of the highest general concern, and, to the extent that local independence militates against its security, the principle of local self-government must be subordinated to more important interests. The motive governing domestic legislation of recent years has been a devolution on the Local Authority of powers as extensive as possible. The Committee have a firm belief in the soundness of this principle, but they hold no less strongly that an important function remains for the Central Government as representing the nation at large, viz: to watch the play of local administration throughout the country, and to bring influence to bear on backward districts, with a view to levelling them up to the standards attained in what are by general consent the best administered areas. They venture to doubt whether this latter consideration has received due prominence. The mass of routine work in which the Local Government Board is immersed, affords it little time for the consideration of questions of public policy in the sphere of health, and may render it slow to assume the responsibility of applying new principles of administration; but it is in these

directions that opportunities for improvement lie, and the Committee think the Board would find in the knowledge and stimulus of such an Advisory Council as has been suggested a most useful auxiliary.

125. The Committee are strongly of opinion that recourse should be had to the methods they have described, and as a first step they think that the making of Building Bye-laws to be approved by the Local Government Board should be made compulsory on the several authorities, urban and rural.

126. The recent French Law on Public Health (*Loi du 15 Février, 1902*) has already been mentioned, but it rests on such logical and intelligible principles that some further account of it at this stage may not be out of place.

Henri Monod :
"La Santé Publique."

127. In the view of its framers it was held to be axiomatic (1) that the whole of any administrative area is threatened by the insalubrity of any of its parts, and (2) that the inhabitants of any *commune* have a right to be protected against the negligence of its municipality.

128. In applying these principles, the framework of the local organization provided by the law presents some obvious advantages. While looking to the local authority to be the executant of those changes which are demanded in the interests of public health, it recognises that that authority is often without the competence or independence to decide upon their nature or extent, and that these questions must be determined by a freer body of expert opinion. There is thus established a hierarchy of powers for the purpose in close connection with, but independent of, the local administration, terminating in "*Le Comité consultatif d'hygiène publique*," which has its seat in the capital and is the supreme adviser of the Minister of the Interior in matters of this character.

129. In immediate connection with this Committee in each department is the "*Conseil d'hygiène départemental*," composed of from ten to fifteen persons, of whom two must be "*Conseillers Généraux*," three doctors of medicine, one a pharmacist, one an engineer, one an architect, and one a veterinary surgeon; by and with the advice of this body it is the duty of the *Conseil Général* to map out the whole department in "*circonscriptions sanitaires*," and provide each *circonscription* with a "*commission sanitaire*," from five to seven in number, of whom one must be a "*Conseiller Général*" elected by his colleagues, and the others experts appointed for a term of years by the *préfet* in the same way as the expert members of each *Conseil d'hygiène départemental*.

130. These *Commissions Sanitaires* form the inspecting and advising body, by whose influence pressure is brought to bear upon negligent municipalities; they can either act (1) on the report of the *maire* of the *commune*, moved thereto by the complaint of occupiers, neighbours, the *bureau d'hygiène* of any town that has one, or the police; (if the *maire* refuses to forward the complaint, the persons interested may address themselves to the *préfet*, who proceeds to charge the commission with the duty of making *inquest*); or (2) upon the direct instruction of the *préfet*. In the last case, the occasion of his intervention is prescribed by the law.

131. By the terms of Art 9—

"Lorsque pendant trois années consécutives le nombre de décès dans une commune a dépassé le chiffre de la mortalité moyenne de la France, le préfet est tenu de charger le conseil départemental d'hygiène de procéder, soit par lui-même, soit par la commission sanitaire de la circonscription, à une enquête sur les conditions sanitaires de la commune."

132. If as the result of this enquiry certain works are said to be necessary they must be carried out, though further resistance on the part of the municipality may necessitate recourse being had to the *Comité consultatif d'hygiène publique*, and, finally, to a decree of the President *en Conseil d'Etat*.

133. All towns of over 20,000 inhabitants are obliged to have a *bureau d'hygiène*, and also most of the communes that possess a thermal establishment.

134. The general effect of these provisions is to combine the various administrative units of the country into one homogeneous organization, inspired by similar ideals and recognizing a common obligation. A sense of sanitary responsibility is awakened and a solidarity of interests established between all classes of the community in furtherance of better conditions of public health.

135. The completeness of the system established under this law, its homogeneity and flexibility, bring into relief the gaps in the chain of responsibility permitted by the happy-go-lucky methods popular in this country. Nowhere, however, is pressure from outside or from above more constantly necessary owing to the multiplicity of independent administrative units.

136. Nothing has been brought more prominently to the notice of the Committee than the ignorance that prevails even in quarters that ought to be well informed as to what the law and the powers it confers are. A statement on this subject was prepared for the information of the Committee, with the assistance of the Local Government Board; and it appears to them that the Board could not do better than issue it, with such additions as they think proper, to all Local Authorities.

137. The Committee are given to understand that the pressure from above, which in many cases they consider so necessary, is very intermittently employed; indeed, in some spheres of the Board's possible activity, it was allowed by Mr. Lithiby that the powers conferred are held in permanent suspense. Thus in no case, with a view to compelling the enforcement by the local authority of "any provisions of the Act which it is their duty to enforce," has the Board ever made an order under s. 299 of the Public Health Act, 1875, limiting the time for the performance of their duty by the local authority; nor has an order, so the Committee believe, ever been issued under s. 31 of the Housing Act, 1890, (Part II.), even if, as seems doubtful, any such order is enforceable.

138. It is not for the Committee to say that the Board is in no circumstances justified in dispensing with the exercise of functions to the discharge of which it is called by the Legislature, but they are concerned to learn that in matters so closely touching Public Health as are covered by the parts of the statutes mentioned, there appear to be insurmountable obstacles to the use of the powers of the Board.

iii. Conditions of Employment.

(a). Character of Employment in relation to physique.

139. With the changes in occupation attending the rapid urbanization of the people, it is obvious that the conditions of employment must enter largely into the causes that determine physique.

140. No one will deny that coincident with the large increase in the number of factory workers great amelioration has taken place in the circumstances of labour, but causes prejudicial to health cannot be altogether eliminated, and under the most favourable conditions degenerative agencies will continue at work. Moreover, it seems to be the case that the advance has been more in the direction of combating the effects of dangerous trades, which, after all, only affect a comparatively small section of the working population. Describing the life of a boy of fourteen in a textile district, who has probably been bred in unwholesome environment and nourished on unnatural food, Mr. Wilson, H.M. Inspector of Factories, said:—

"The hours will be long, fifty-five per week, and the atmosphere he breathes very confined, perchance also dusty. Employment of this character, especially if carried on in high temperatures, rarely fosters growth or development; the stunted child elongates slightly in time, but remains very thin, loses colour, the muscles remain small, especially those of the upper limbs, the legs are inclined to become bowed, more particularly if heavy weights have to be habitually carried, the arch of the foot flattens and the teeth decay rapidly."

141. He continues :—

"The girls exhibit the same shortness of stature, the same miserable development, and they possess the same sallow cheeks and carious teeth. I have also observed that at an age when girls brought up under wholesome conditions usually possess a luxuriant growth of hair, these factory girls have a scanty crop which, when tied back, is simply a wisp or 'rat's tail.'"

But he added the impression that, generally speaking, females withstand the evil effects of adverse environment slightly better than males from birth to at least maturity, a circumstance which may to some extent be counted among the causes that arrest the transmission of these effects to the next generation.

142. It was noted by the same witness that occupations had a profoundly selective effect, the strongest following the calling where their physical powers will have the maximum advantage in wage earning, and the weakest drifting to those where their lack of vigour will tell least against them. By this pressure the weaker vessels are constantly recruiting those fields of employment least capable of fostering development, and the poorest in physique are those met with in the lowest paid and unskilled textile operations. Another witness put this clearly, and stated that there was a regular gradation through the factories of the more or less inefficient boys, who could not get better employment by reason of their poor physique, and this has been more apparent since the operation of the Factory Act of 1901, because employers are more careful than formerly to weed out unsuitable candidates.

Wilson, 1934-5.

Young, 2054-7,
2069.(b). *General Conditions of Factory Employment.*

143. It must not be assumed, however, that factory life is necessarily injurious to persons of normal health; indeed, Miss Anderson, H.M. Principal Lady Inspector of Factories, went so far as to say that within proper limits as to hours and periods, and with such hygienic surroundings as are attainable, it may be a means of improving the health of women and girls of the poorer classes.

Anderson, 1466-8,
1580-4.

144. Dr. Young, whose evidence has been already mentioned, furnished the Committee with opinions collected from various factory surgeons throughout the country as to the comparative physique of the factory class: the general direction of those opinions (with exceptions) was to the effect that there was no general deterioration at the present time, but rather a gradual improvement; and such was Dr. Young's personal impression.

Young, 2076-2091,
2117.

145. Dr. Young also thought that the system of factory surgeons had been productive of beneficial results, not only in the rejection of cases not fit for employment, but also in the moral influence exercised by the surgeons in the way of cleanliness and decency; it was further stated that the latitude granted under the last Factory Act to assign candidates for employment in factories to certain industries, or certain departments of an industry, was working very well and likely to be fruitful of good.

Anderson, 1523-8.

146. Miss Anderson indicated very clearly the difference in the functions of factory inspectors and certifying surgeons, pointing out that the former are better able to speak of the "conditions affecting health in the factories than of the results in the workers' state of health." The duty of the certifying surgeon is to certify as to the qualification of children and young persons for employment, to inquire into accidents and certain cases of notifiable disease, to re-examine persons under sixteen (if required by the inspector), and to report to the Secretary of State as to health generally.

Anderson, 1444-6.

Anderson, 1480-
1509, 1544-1554.
Appendix XV.

147. Miss Anderson gave a classification of the sources of injury to health, life and limb, from factory employment, as follows:—

1. Accidents.
2. Poisoning and damage from toxic agents, or excessive dust, fumes, &c.
3. Over-fatigue.
4. Defective ordinary hygiene.

Scott, 1781, 1860.

As regards the first two, men suffer most; as regards the third, women. And on this head Miss Anderson, as well as Dr. Scott, thought there had not been a sufficient amount of scientific study. At the Brussels Congress it was recommended that Governments should do all in their power to further an enquiry into over-fatigue. In many cases hours are too long for women, and in some industries, especially the clothing trade and dressmaking, there are not sufficient pauses for food. Laundries and food-preserving industries give an example of too long hours; and excessive strain by carrying heavy weights takes place in food-preserving works, bleach and dye works, earthenware and china works, and various metal trades. Besides this the worker must often contend with extremes of temperature and often with the humid atmosphere which is inseparable from some forms of industry.

148. Generally, however, Miss Anderson pointed out that remedies were being applied by law, and year by year better applied, to remove these defects; and she suggested that we had by no means had time yet to see the full effects which might be expected from the Factory and Workshop Act, 1901.

Garnett, 9065-8,
9129-9133.

149. Miss Garnett approved of the provisions of this Act, but did not think they were properly applied in the Staffordshire Potteries; the worst offenders were the small manufacturers who had risen quickly. Mr. Wilson did not think legislative interference had reached its maximum; and he, too, pointed to the terrible strain of long hours; in some cases, even for children, the hours of work being twelve, with two hours off for meals. He also instanced the lack of ventilation in work-rooms where people are engaged in sedentary occupations. Dr. Legge thought exposure to injurious dust the worst feature of factory life, and that employment in a humid atmosphere gradually undermined the health, but he admitted that we were working on the right lines towards reform in these matters.

150. In regard to the important point of ventilation, Section 7 of the Act of 1901 provides that—

“In every room in any factory or workshop sufficient means of ventilation shall be provided and sufficient ventilation shall be maintained.”

There is no definition of the word *sufficient*, but the Secretary of State has power by Order to prescribe a standard of sufficiency for any class of factories or workshops. Since the passing of the Act of 1901, only one such order has been made, and this merely fills up a gap created by the repeal of previous enactments. By this Order, dated February 4th, 1902, a minimum of 600 cubic feet of fresh air per hour is prescribed for each person employed in every textile factory, not being a cotton-cloth factory, in which atmospheric humidity is artificially produced by steaming or otherwise, and in which no special rules in regard to humidity are in force. Besides the fact that the above Order is limited in its application, no standard of ventilation in terms of gaseous impurity has hitherto been prescribed, partly in consequence of a difference of opinion between the Ventilation Committee and various bodies, such as the Society of Medical Officers of Health; so that bad ventilation in many cases still cries for a remedy. Instances of such cases were given by Mr. Rowntree, in whose own works there are large rooms where 500 girls are employed and the air is changed every seven minutes, and is passed through water screens.

Rowntree, 5191.

151. The question of employment of women in relation to child-bearing was much discussed, but can be better considered in relation to child life.

Other effects of the employment of women are the tendency it sometimes has to encourage men to loaf while their wives earn the wages, and actually to cut men out of work; also the tendency to encourage neglect of home and children. The number of women employed in factories is not diminishing relatively to the population, but, except in the laundry industry, there is no significant increase. Miss Anderson thought that in some districts the general tendency of factory life was to disincline young persons for home responsibilities.

Garnett 9345-9367.

Anderson, 1617, 8, 1619-1624.

152. Dr. Scott deprecated the system of half-time employment under the Factory Acts as not conducive to the health of the children. The amount of half-time is, however, reduced at the present day; for instance, in Dundee which, along with Paisley, is practically the only town in Scotland where this form of employment prevails, it does not affect more than 1,200, whereas, in 1896, 2,800 children were so employed. Mr. Wilson gave some measurements of children employed in factories compared with average measurements, greatly to the disadvantage of the former.

Scott, 1667, 8, 1786-1797.

Wilson, 1921-5, 1936.

153. While admitting for the most part that the provisions of the Factory Act are on the right lines, various witnesses had an important improvement to suggest, namely, an organised Medical Inspection of Factories; that is to say, an extension of the existing powers of certifying factory surgeons (1) so as to enable them to examine employees for purposes of qualification at a later age than sixteen (this Miss Anderson would limit for the present to eighteen or twenty-one), (2) so as to enable them to re-examine, when necessary, at definite intervals, and (3) so as to include the general powers of medical officers of health in regard to insanitary conditions. In this connection the danger of phthisis and other forms of tuberculosis in factories was emphasised by Dr. Scott and Dr. Young; and Dr. Young would make notification of these diseases in factories compulsory.

Young, 2165-8.

Anderson, 1523-1530, 1446-1451.

Scott, 1762-5, 1829-1831.

Scott, 1715-1721.
Young, 2146-7.

154. Dr. T. M. Legge, Medical Inspector of Factories, intimated that the greater part of his time was taken up in dealing with trades specially scheduled as dangerous; and the fact seems to be that, while the risks in these trades have been greatly reduced, it is now time to devote more attention to the working of the general provisions of the Factory Act, and to getting those provisions supplemented where necessary.

Legge, 5810-1.

155. The appointment of women inspectors in greater abundance than at present was also advocated; and Dr. Young mentioned that in Hudson's Soap Works and the Diamond Match Works the appointment by the employers of special lady superintendents has had great influence for good on the health of the employees.

Young, 2103.

Garnett, 9314-9327.

156. Dr. Scott was strongly of opinion that the medical examination of young persons should be extended so as to cover their entry into coal pits. The only present condition is that they must be a certain age, and according to his evidence, "It does not matter to the managers whether they are scrofulous, rickety, phthisical or anything else—they get them into the pit." Dr. Young also instanced coal miners as a class liable to degeneration.

Scott, 1721.

Young, 2116.

157. The Committee desire to endorse generally these recommendations.

(c) Small Workshops and Home Work.

158. There appears to be a lack of regulation and control over small workshops; though they come to some extent under the provisions of the Factory Act, they contrive to escape notice, and are often not visited at all. Dr. Scott called attention to the fact that the certifying surgeon examines children and young persons in factories but not in workshops, whereas these last are not, in his experience, as healthy as factories. It appears that there are practically no examinations by certifying surgeons of children and young persons in any kind of workshop. In factories such an examination is com-

Legge 5911, 2.

Scott, 1653-5.

pulsory (section 63 of the Factory Act, 1901). In workshops it is only undertaken at the request of the occupier (section 65 of the same Act), save in particular cases where the Secretary of State makes a special order under section 66. As a matter of fact, no such order, the Committee understand, has been made. The result is that, as shown by the statistics published in the report of the Chief Inspector of Factories, for 1901, while 376,278 children and young persons were examined in factories, only 413 were examined in workshops. As the case stands, there is practically nothing to prevent a child rejected for factory work from at once finding employment in a workshop. No doubt one of the reasons for this is the multiplicity of workshops, of which the Committee understand there were under inspection in 1901 143,065, as against 97,845 factories. Obviously the extension of the certifying surgeon's inspection of children and young persons to cover employment in workshops, would be a formidable undertaking, but the Committee are of opinion that the matter is one which calls for the earnest consideration of the department concerned.

159. Local authorities have now the power to deal with places where "homework" is being carried on, in a systematic way, and it appears that in some places this is being done. But in regard to small workshops Mr. Booth pointed out that they are not included within the purview of Sec. 108 of the Act of 1901, and with a view to counteracting the neglect under which, as has been said above, these establishments suffer, he advocated a double system of licence by which both the owner of the premises and the employer might be made responsible.

III. ALCOHOLISM.

160. Next to the urbanization of the people and intimately associated with it, as the outcome of many of the conditions it creates, the question of "drink" occupies a prominent place among the causes of degeneration. The close connection between a craving for drink and bad housing, bad feeding, a polluted and depressing atmosphere, long hours of work in overheated and often ill-ventilated rooms, only relieved by the excitements of town life, is too self-evident to need demonstration, nor unfortunately is the extent of the evil more open to dispute.

161. The evidence laid before the Committee teems with testimony as to the disastrous operation of these causes. Dr. Scott puts alcohol first among the influences that retard improvement.

Scott, 1777, 8.
"They are living on it, some of them, and the lower you go the worse it is."

And Mrs. Mackenzie expressed the general view when she said—

Mrs. Mackenzie,
7068.
"I think that if the drink question were removed, three-fourths of the difficulty and the poverty and degradation altogether would go along with it."

162. Not only is poverty the result of drink, but it becomes an active agent in promoting it.

Niven, 6297.
"People who have not enough food turn to drink to satisfy their cravings, and also to support their enfeebled hearts by alcohol";

or, as another witness said—

Jones, 10814.
"The poor often drink to get the effects of a good meal. They mistake the feeling of stimulation after alcohol for the feeling of nutrition."

Ormsby, 12732.
They turn to it to blunt their sensibility to squalor, and it reacts in deadening all desire for improvement. On the other hand, Sir L. Ormsby noticed more drunkenness among the artizan population in Dublin owing to the fact that being in receipt of good wages they had a larger margin to spend in drink.

Eichholz, 436.
163. As to whether drunkenness is on the increase it is not perhaps easy to speak. Dr. Eichholz, in his investigation into the condition of the children in a poor school in Lambeth, was informed that there were not more

than twelve parents out of two hundred who did not "fortify themselves by the irregular use of alcoholic stimulants." Dr. Niven gave a list of occupations with which intemperance was more particularly associated; but Manchester witnesses seemed to think that, on the whole, there was less general drunkenness. Mr. Fosbroke, Medical Officer of Health to the Worcester County Council, believed there was less among agricultural labourers, and, with exceptions in certain districts, this is probably true of England as a whole; both Scotch and Irish witnesses declined to testify to any considerable improvement within their experience, though the worst conditions are probably limited to the towns small and great.

Niven, 6288-9,
6297-8.
Rees, 4342-9.
Worthington, 7316.
Boston, 7443.
Fosbroke, 6550.

Scott, 1777-1780.
Cameron, 10989.
Kelly, 11316-11320.

164. In one respect, however, and that in a direction pregnant with evil, there is an admitted increase. The tendency of the evidence was to show that drinking habits among the women of the working classes are certainly growing, with consequences extremely prejudicial to the care of the offspring, not to speak of the possibility of children being born permanently disabled. Factory labour is mentioned as a predisposing cause, and Miss Garnett noted the pernicious effects of drink clubs on the young girls employed in the Potteries. Dr. Wiglesworth instanced the depressing influence of pregnancy as a cause with many, and the general effect of town life in creating a demand for excitement and lessening the force of public opinion was mentioned by others. Sir Charles Cameron, Medical Officer of Health for the City of Dublin, attributed to similar causes a marked increase in general intemperance in that city. On the other hand, intemperance among young women in rural districts is believed to be rare.

Eichholz, 436.
Scott, 1780.
Rees, 4347.
Rowntree, 5047-9.
Smith, 8503-4.
Lamb, 11519.
Wilson, 1945.
Young, 2108.
Garnett, 9079-9086,
9171-2.
Jones, 10823.
Eccles, 10712.
Wiglesworth, 8985.

Cameron, 10986-9.

Close, 2766-7

165. Besides the large mass of general evidence tendered on the subject, the Committee had the advantage of hearing two special witnesses who presented themselves as the result of concerted action on the part of a group of medical men who have been particularly interested in the effects of alcohol.

166. Of these gentlemen—fourteen in number—five represented the alienist side, four were hospital physicians, two hospital surgeons, one a medical officer of health, one a workhouse medical officer, and one the medical officer of a medical mission: with them were associated four laymen, Mr. J. Henderson, representing the National Temperance League, Mr. Stafford Howard, Director of the United Kingdom Temperance and General Provident Institution, and the Secretaries of the Central Temperance Legislation Board and the National Temperance League. Following upon the deliberations of a Conference so constituted, certain authoritative statements were submitted to the Committee, upon which it was proposed to base evidence on the relationship of alcohol to physical deterioration, and Mr. McAdam Eccles and Dr. Robert Jones were selected as witnesses.

Appendix XVI.

167. The first point on which Mr. Eccles laid stress was the physical action of alcohol on tissues. Illustrating this by the results of experiments on vegetable growths, animal protoplasm, and the development of certain eggs, he argued that the action upon the cells of the entire body is similar in character and operative in the same adverse manner. These facts are held to be of special importance, when the great increase of drinking among women already described is realised. It is true, as was pointed out, that history affords instances of drunken nations whose vitality does not seem to have been greatly interfered with, but this is assumed to have been the case because the mothers of the race were sober, and the conclusion is stated that,

Eccles, 10656,
Appendix XV

"If the mother as well as the father is given to drink, the progeny will deteriorate in every way and the future of the race is imperilled."

Appendix XVI., 12,
2, 3.

168. Mr. Eccles submitted some striking figures (1) from Dr. Tatham's letter to the Registrar General, (2) from certain Insurance Tables, to prove the effect of alcohol in shortening life. According to the first it has been ascertained that of 61,215 men between 25 and 65, 1,000 die in one year, but of

61,215 publicans no less than 1,642 die in one year, while of Rechabites (abstainers) only 560 die. Under the second head the higher vitality of temperance lives is shown by the fact that, whereas out of 100,000 persons aged 30, some 44,000 would, according to the average rates of mortality, survive to the age of 70, over 55,000 abstainers might be expected to reach that age, or 25 per cent. more.

Jones, *passim*.
Appendix XVI., 4

169. The lunacy figures, which were dealt with by Dr. Jones, show a large and, in some cases, an increasing number of admissions of both sexes which are due to drink, and an increase of general paralysis among lunacy patients tells the same tale.

170. Special causes appear at work in particular places: thus in Nottingham, where so many women are employed in lace factories, twice as many women as men are received into the asylum whose insanity is ascribed to drink. In Sunderland, on the other hand, where the prosperity of the mechanic and the miner is evidenced by higher wages and abundant work, the proportion reaches 38·6 per cent. for men as compared to 20 per cent. for women. But even these figures are surpassed in Scotland. From the report of the Gartloch Asylum for the City of Glasgow the percentage of males was 45 and of females 26·8.

171. The influence of climate has, of course, to be considered in connection with these figures. In marked contrast to the foregoing, we find the case of Cornwall, which for men and women gives a combined average of under 2 per cent., and of rural Kent, which gives a combined average of 3·8 per cent.

172. In summing up the influences of alcoholism Dr. Jones states—

Appendix XVI., 4.

"Alcohol perverts the moral nature, affects the judgment, and impairs the memory; it moreover especially affects the motor system and creates an enormous loss to the community through destroying the productiveness of the skilled craftsman."

He goes on—

"In regard to the effects of alcohol upon the descendants, anything which devitalizes the parent unfavourably affects the offspring, and *clinical experience supports this in the lowered height, weight, and impaired general physique of the issue of intemperate parents.* It also records the fact that no less than 42 per cent. of all periodic inebriates relate a history of either drink, insanity or epilepsy in their ancestors."

Appendix XVI., 8.

171. In further illustration of this point it is stated as the result of observation of the offspring of female chronic drunkards in Liverpool prison, (1) that the death rate among the infants of inebriate mothers was nearly two-and-a-half times that among the infants of sober mothers of the same stock; (2) that in the alcoholic family there was a decrease of vitality in successive children, e.g., in one family the earlier born children were healthy, the fourth was of defective intelligence, the fifth an epileptic idiot, the sixth still-born, nature at last providing its own remedy; (3) that taking women of the same class, with 125 children of 21 drunken mothers, 69 died under two years = 55 per cent., while of 138 children of 28 sober mothers, 33 died under two years = 23·9 per cent.

172. Both Mr. Eccles and Dr. Jones testified to the vulnerability of alcoholic persons to syphilis and tuberculosis, and to their general liability to all forms of what in common parlance are called inflammatory disorders; such persons also suffer much longer from the effects of any malady, thus involving their dependents in prolonged privation.

173. As the result of the evidence laid before them, the Committee are convinced that the abuse of alcoholic stimulants is a most potent and deadly agent of physical deterioration.

174. The mere statement of the contributory causes indicates some, at any rate, of the lines along which remedial effort may work effectually.

Every step gained towards the solution of the housing problem is something won for sobriety. Direct proof was forthcoming of men, who had been addicted to alcohol, passing into better surroundings, with the result that they realized the fact and found it a help to them in struggling against their weakness. The provision of properly selected and carefully prepared food ranks next in value, and to this end, as will be shown later, there is much room for training of a socially educative character among girls and the younger generation of women.

175. Large classes must, however, from one cause or another, be compelled to obtain their food ready cooked, and in this connection it is eminently desirable that increased facilities should be furnished. It may take time to bring into existence many restaurants of the type required, but there seems no reason why something should not be done at once to transform the nature of the ordinary public-house and render it a place where food of a suitable kind should be as readily procurable as beer. The Committee look to the operations of such Associations as Lord Grey's to promote these objects. The want of easily accessible and attractive means of recreation makes the public-house the only centre of social relaxation. English towns are usually ill-supplied with planted footways where, in genial weather, the working man and his family can resort for the enjoyment of the open air and intercourse with neighbours. The opportunities offered to the young to find pleasure and stimulus in physical exertion are inadequate and ill-chosen. Evidence will be referred to in another place, showing that the effects of physical training on young men are to convince them that in abstinence is to be sought the source of muscular vigour and dexterity; but means of obtaining this training on a comprehensive and systematic scale are sadly lacking.

176. Beyond all expedients of this sort, which can only operate in mitigation of the evils they are designed to meet, the Committee are impressed with the conviction that some general educative impulse is in request which will bring home to the community at large the gravity of the issue and the extent to which it is within individual effort to promote and make effective the conclusions of expert opinion.

177. In view of similar dangers on the other side of the Channel, the French Government have adopted the plan of circulating throughout the schools, barracks, and post offices, etc., of the country a document (quoted in full in Dr. Eichholz' evidence) setting forth in a few well-written and cogent sentences the evils of indulgence in alcoholic stimulants.

Eichholz, 507-512.

178. In this country, no doubt, much has been accomplished in this direction by the efforts of the various Temperance and Total Abstinence Societies whose organisation is more widespread and longer established than in France; but it is nevertheless worthy of consideration whether the efforts of such societies might not usefully be supplemented by State action in furtherance of the dissemination of temperance literature.

179. The systematic training of teachers in the laws of health, and rational instruction in schools, embracing, but not confined to, an explanation of the effects of alcohol on the system, would do much to prepare the way for the comprehension and appreciation of more direct temperance instruction, which to be effective must be given at a later age. This more direct instruction might be imparted in various ways, e.g., by lectures on public health organized by the municipality or by the different health and temperance societies. Associations like the Manchester and Salford Ladies' Health Society, which the Committee would gladly see in every large city, could give special attention to saving young mothers from the temptation to drink, and health visitors of all kinds should be charged with the duty of combating the evil by every means in their power.

180. It is outside the scope of the Committee's responsibility to recommend any large changes in the laws for the regulation of the liquor

traffic, but it will not be presumptuous for them to call attention to what has been done in other countries by legislation.

Appendix XVI, II

181. The statements submitted by the Conference above referred to (paragraph 166) include some remarkable diagrams prepared by Dr. Legrain, Superintendent of the Asylum at Ville Evrard, Paris, showing the increase of consumption of spirits in France and Belgium since 1830, and coincidently therewith an upward trend of the consequences of drink, such as accidental deaths and suicides, lunacy and common crimes, and notably, as to France, a definite increase of the percentage of conscripts refused as unfit for service. Thus, in France, the consumption of proof spirits containing 50 per cent. alcohol in 1830 was 2·2 litres per head; in 1898 it had risen to 10·16 litres; the rejection of conscripts was 21 per cent. in 1830, and in 1895 it had risen to 32 per cent.

182. Diagrams are also given illustrating a totally different state of things in the countries where the consumption of drink, owing to wise legislation, has been steadily decreasing, viz., Norway and Sweden. In the last named, the reverse of the picture presented by France is complete, seeing that besides a diminution in crimes, suicides and deaths from alcoholism and syphilitic diseases, the percentage of conscripts refused has been steadily reduced, showing an elevation in the standard constitution of the people. Thus in Sweden the consumption of spirits containing 50 per cent. alcohol in 1830 was 46 litres, and in 1890, 6 litres per head. The percentage of rejection of conscripts in 1845 was 34·46, and in 1885, 19·61.

183. The Committee cannot but commend these facts to the most serious attention of the Government.

IV. DEPLETION OF RURAL DISTRICTS BY THE EXODUS OF THE BEST TYPES.

184. Another factor in the alleged deterioration of the people, connected like the last with their aggregation in towns, is said to be the withdrawal from the rural districts of the most capable of the population, leaving the inferior types to supply their place and continue the stock, the evil being often aggravated, in the opinion of some, by the drifting into the country of the debilitated town population, which is crowded out by the inrush of more vigorous elements.

185. There appears on the face of it to be considerable probability that both these movements are in operation. The effect of certain conditions of town life on the weaker members of the community, and the selective tendency of certain classes of employment which creates a demand for men of greater physical efficiency than is to be found as a rule in a town-bred population, are constantly drawing upon the resources of the rural districts, and it is presumably the men of most energy and possibly of finer physique that respond to the allurements offered them.

186. Thus after describing the splendid men to be found working as navvies, pig-iron carriers in blast furnaces, bleaching powder packers, cement workers, labourers in steel plate mills, and steel smelters, occupations which are not only exceedingly arduous, but throw a severe strain on the powers of endurance and speedily sift out the inefficients, Mr. Wilson says:—

“The vast majority of these workers are country bred and have grown to maturity in farm or outdoor work.”

187. Mr. Fosbroke, Medical Officer of Health to the Worcestershire County Council, whose evidence was exclusively concerned with the conditions of health in the rural district with which he is familiar, had no doubt that notwithstanding better wages, better housing, and better feeding, the physique of the agricultural labourer had deteriorated owing to the

depletion of the rural population by the exodus of the best types into the towns. In practical proof of this allegation he stated :—

"That thirty years ago it was the commonest thing for a labourer to carry two and a quarter cwt. of corn up a ladder ; now you very seldom see it. Farmers tell me the same." Fosbroke, 6539-6543.

And again :—

"Generally the farmers say that the men are of a weaker type altogether. The more robust men go into the towns."

188. He admitted that drunkenness and specific diseases menacing to human life and vitality were diminishing, and believed this falling off in physique solely due to the fact that the stronger types move out of the country and leave reproductivity to the poorer. He had, however, to own that he knew of no investigation into physical characters that bore out his opinion ; indeed, such facts of the kind as were obtainable pointed in the other direction. There is no difficulty in keeping up the standard of the police, and an experienced medical officer of a post office at Worcester, who had been under the impression that there was deterioration, found on going into the whole of his records that this was not so, when he took the average heights and weights and chest measurements, and so on. Fosbroke, 6536-6558.

189. This admission coming from a witness whose own beliefs it belied, seems to the Committee to furnish very cogent reasons for the institution of the Anthropometric survey which they recommend ; the condition of the rural population as a reservoir of national strength is of first-rate importance, and yet on a point so crucial the opinions of an intelligent and candid observer are liable to be upset by a fragment of scientific evidence.

190. It is with a view to correct impressions, however acquired, and to get at the bedrock of fact, that the Committee so earnestly look to the results of methodical enquiry on the lines suggested. In the confidence that by no other means can these questions be satisfactorily determined the Committee are supported by the testimony of every competent witness.

191. There cannot, however, be any controversy as to the expediency of arresting, where possible, the exodus to which such baneful results are attributed. Nothing, perhaps, would be so likely to force upon the urban communities the necessity of healing their own sores, and bringing up a healthy population within their own limits, as the cessation of the influx of vigorous bodies to take the place of the crushed and broken by the wheels of city life.

192. No great body of evidence was submitted as to how this might be done, but Mr. Fosbroke himself mentioned one most successful experiment of the Worcestershire County Council, under the Small Holdings Act, by which 147 acres of land had been purchased and resold to small holders in plots varying from two to eight acres, loans being made to them at the same time for building houses. Mr. Fosbroke also testified to the value of allotments in the same direction, in diminishing mendicancy, interesting the rural population in the cultivation of the soil, and increasing their appreciation of country life. Fosbroke, 6565-6576.

193. The Committee may here record their opinion that the school might be made a most valuable agent towards the attainment of these objects, and they are not without hope that the recent Education Act, by bringing all forms of secular instruction under a popularly elected local authority, may greatly contribute to that end.

194. It must not be supposed that they contemplate any change by which the rural school should become a less efficient agent for the equipment of the promising scholar whose manifest destiny is to seek elsewhere a more fitting field for his activities. But for one such, numbers are tempted to incur the competition of town life with no better prospect than to swell the ranks of

unskilled labour, owing to lack of interest in their home surroundings and to no effort being made to open their minds to the resources and opportunities of rural existence, and to the saner and more wholesome atmosphere that pervades it.

195. The Committee accordingly have great sympathy with the view expressed by the late M. Felix Pécaut :—

"First of all, teach the children to take an interest, not only in books, but in the life of the fields. Teach them gardening, and how to keep bees, the making of cheese, and the management of a dairy. Show them the reason of these things, their cause, and the possible improvements. Above all, in educating your little rustics do not impose an ideal from without; work your reform from within. Make your scheme of education deliberately rural; be sober, just; teach them courage, and the contempt of mere ease and well being; give them a wholesome, ample way of looking at things; instil the taste for an active life, the delight in physical energy."

The Committee would commend this passage to the special consideration of those charged with the conduct and control of rural schools.

196. Another cause which, it is stated, tends to swell the stream of emigration towards the town, is the difficulty of obtaining cottages. Mrs. Arthur Lyttelton said, "The people cannot get cottages; they leave the country because they cannot get cottages." The very activity of the Sanitary Authority in removing sources of mischief contributes to this result. There are many houses, according to Mr. Fosbroke, really unfit for habitation which, if you were to try to bring them up to a proper standard, you would only succeed in closing, and there would be nothing else to take their place. He went on to say he could name one district where a whole series of houses had been closed because the landlord would not do anything, and these formed part of a large estate.

197. The Committee think that in such circumstances means should be found for bringing pressure to bear on the Rural Sanitary Authority for the adoption of Part III. of the Housing Act, 1890, to which end provisions would seem necessary similar to those contained in the Labourers (Ireland) Acts, 1883-1903. The Committee understand that since 1900, when the powers of Rural Authorities under the Act of 1890 were extended, only two District Councils have actually built cottages.

198. A statement of Mr. Rowntree's may here be given with advantage.

"I am associated with a little scheme in York conducted by private enterprise where we are trying to get people to move out. We are building cottages about a mile from the boundary of the city, each cottage having a garden, and we find that we can build an artistic cottage thoroughly well built of the best materials with a large living room and scullery, bath, three good bedrooms, and a garden, to let at 4s. 6d. a week, the tenant paying rates, to show 4 per cent. on capital."

199. There is one movement that may properly be mentioned in this connection, which, though it has not for its object the arrest of emigration toward, may have such effect.

200. The Garden City Association is designed to induce manufacturers to remove their plant and their workpeople into newly developed areas in the country where every hygienic safeguard will be applied to the aggregation of an industrial population, and that aggregation so controlled within due limits that rural conditions may be permanently associated with urban life.

201. The Committee had the advantage of hearing evidence on this subject from Mr. Ralph Neville, K.C., the chairman of the Company formed for the object, who described in detail the intentions of the Association in laying out an estate of 3,800 acres which has been bought for the purpose in the neighbourhood of Hitchin. These are briefly :—

(a) "The provision of a minimum space, say one-tenth an acre for each family; (b) covenants against overcrowding; (c) provision of an agricultural belt around the town; (d) reasonable measures to prevent smoke--Mond gas to generate electricity, etc.; (e) in a town surrounded by

Lyttelton, 1886.

Fosbroke, 6577-
6589.

Thompson's
"Housing
Handbook."

Rowntree, 5079.

Neville, 4771.

its own agricultural estate, on which intensive culture would prevail, fresh fruit, vegetables, and milk would be cheap and abundant."

202. Mr. Neville claimed for this scheme the promise of considerable support from London manufacturers, and explained its advantages in these terms :—

"1. Conditions of life for the artisan and townsman, consistent with sound health for himself, his wife, and his children. 2. Cheapness, efficiency, and sightliness resulting from the scientific laying out of the town as a whole from the outset. In connection with this head may be grouped: (a) the supply of light, water power, and heat; (b) facility of transit and communication; (c) disposal of sewage. 3. The reduction of rates by the application of the increment in the value of the lands so far as it can be secured for the benefit of the inhabitants. 4. Bringing a market to the farmers of the agricultural land, and incidentally (a) increasing the amount of labour employed upon the land by the extension of small culture. May I pause there to say that I attach an enormous deal of importance to that. It seems to me that this is the only scheme that I have come across, if it were carried out, which does offer a prospect of largely increasing the amount of labour employed upon the land. Of course, we all know the enormous amount of small produce imported into the country at the present time, and that is largely in consequence of the railway rates, the cost of handling, and the difficulty of getting the produce to the market. If you could distribute the population you would very largely increase small culture, and that means more hands on the land than there are at present. (b) Affording the agricultural labourer the advantages of town life."

203. Mr. Neville considered that this scheme might ultimately be made the model for State enterprise, as in the event of its development prices might become prohibitive and recourse to the Lands Clauses Consolidation Act might prove the only alternative. He did not propose to call upon the State to incur any risk on its own account, but merely to legalise the action of private Companies; in fact it was nothing more than benevolent assistance to which he looked.

204. The Committee wish every prosperity to the effort, and think that if the experiment is successful any such help from the State would be more than repaid by the solution the scheme offers for so many of the problems that at present perplex and hamper its action.

205. Evidence given before the Royal Commission on Physical Training (Scotland) seemed to suggest that the physique of the population in certain of the Home Counties had suffered by the outflow of debilitated types from the metropolitan area. No very conclusive confirmation of this theory was laid before the Committee, but Mr. Tweedy, in the course of what he had to say on the migration of the stronger types into the towns, expressed the opinion that a reverse process was going on.

"There is a current of the better and more adventurous people into the towns, and also a smaller reverse current of the feebler and less strong and fit, who are driven back to the land again,"

the rural districts becoming thus both the recruiting ground and the asylum of the towns.

Tweedy, 3762-3.

206. The aspect of the question discussed in this section has special features in Ireland, which require separate consideration. The witnesses from that country were emphatic in ascribing to emigration fatal effects upon the physique of the people by the withdrawal of the strongest and best types, thus leaving it to the less ablebodied to reproduce their kind and carry on the race. Dr. C. R. Browne, whose name has already been quoted as associated with that of Prof. Cunningham in certain anthropometric investigations in the West of Ireland, stated :—

"The sound and the healthy—the young men and young women—from the rural districts emigrate to America in tremendous numbers, and it is only the more enterprising and the more active that go as a rule."

Browne, 9660.

207. Dr. Kelly, the Roman Catholic Bishop of Ross, carried the point further, in describing how the conditions attending emigration at the present time had aggravated the circumstances of the case. He says :—

"There are some features of the emigration that I wish to emphasise. Emigration began Kelly, 1127 a very strong flow out of Ireland in the famine times and immediately after the famine,

but at that period it was the emigration of whole families. I know in various parts of Ireland there were whole families which went to a foreign country during the famine or immediately after the famine. That had no effect on the physique of those who remained behind—it left things *in statu quo*. Then for several years afterwards a considerable number of families did go. When the younger and more vigorous members went to America or Australia, after some years they were not satisfied until they finally took out the old father and mother and the young members of the family. So that although the numbers emigrating were larger it did not affect the physique of those remaining behind. But for a considerable number of years it has been only the strong and vigorous that go—the old people and the weaklings remain behind in Ireland. That has arisen from several causes. One of the causes is that the authorities in the United States have become particularly strict about the physical condition of the immigrants into the States; they have a stricter medical examination when the immigrants land, and if they are not found physically fit they are sent back again. Then the shipping companies, finding that they had to carry back *gratis* those emigrants, have become very particular, so that before a shipping company in Ireland will take an emigrant, the emigrant has to make a solemn declaration that he is not suffering from tuberculosis or scrofulous glands or insanity or diseases of the eyes. The emigrants very largely have to get themselves medically examined before they leave home at all. So that the present flow of emigration, though smaller in volume, has a much more serious and deleterious effect on the physical condition of the population of the country. Now as to the number of emigrants: from 1851 to 1901, 3,846,393 people emigrated in those fifty years, an average of 77,000 in the year. For the last twenty years the average would hardly reach 50,000. I could give you the particular figures, but they will not interest you. The taking away of 50,000 strong, vigorous men and women every year from the country has a very serious effect. According to the Registrar-General, of those 50,000 on an average who emigrate, 81·5 per cent. of the total emigrants are between fifteen and thirty-five years of age. Therefore of the 50,000 over 40,000 were between the ages of fifteen and thirty-five."

Browne, 9660-9673,
9836-8.
Kelly, 11197-11201,
11211-11216.

208. By the operation of these causes the flower of the rural population is depleted, and an undue proportion of weaklings constitutes the stock from which the population of Ireland is recruited. To the effect of this both witnesses attributed a large measure of the increase in lunacy, a subject to which return will be made later under a special heading of the report.

V. ALLEGED TENDENCY OF SUPERIOR STOCKS IN ALL CLASSES TOWARDS A DIMINISHED RATE OF REPRODUCTION.

209. The alleged tendency of the superior stocks in all classes towards a diminished rate of reproduction deserves some notice as one of the possible causes of physical deterioration.

210. So far as this allegation is based upon a diminished birth-rate, a fact general in varying degrees over the whole of Western Europe, there appear in this country at all events to be certain compensating considerations, inasmuch as the Registrar-General's Returns show that among the factors in the reduced birth-rate are: (1) the raising of the age at which marriages are contracted, and (2) a diminution in the number of illegitimate births, both, it will be readily agreed, circumstances tending to the improvement rather than the deterioration of the race.

211. But a more serious view has been taken and put forward by high scientific authority, which, if correct, points to a condition of things which cannot in the long run fail to react adversely on the physical characters of the people.

212. In the Huxley lecture for 1903, Professor Karl Pearson made this announcement:—

"Looking round impassionately from the calm atmosphere of anthropology, I fear there really does exist a lack of leaders of the highest intelligence, in science, in the arts, in trade, even in politics. I do seem to see a want of intelligence in the British merchant, in the British professional man and in the British workman. I believe we have a paucity, just now, of the better intelligences to guide us, and of the moderate intelligences to be successfully guided. The only account we can give of this is that we are ceasing as a nation to breed intelligence as we did fifty to a hundred years ago. The mentally better stock in the nation is not reproducing itself at the same rate as it did of old; the less able, and the less energetic, are more fertile than the better stocks. The only remedy, if one be possible at all, is to alter the relative fertility of the good and the bad stocks in the community. Let us have a census of the effective size of families among the intellectual classes now and a comparison with the effective size of families

in the like classes in the first half of last century. You will, I feel certain, find, as in the case of recent like censuses in America, that the intellectual classes are now scarcely reproducing their own numbers, and are very far from keeping pace with the total growth of the nation. Compare in another such census the fertility of the more intelligent working man with that of the uneducated hand labourer. You will, I again feel certain, find that grave changes have taken place in relative fertility during the last forty years. We stand, I venture to think, at the commencement of an epoch which will be marked by a great dearth of ability.

* * * * *

The remedy lies first in getting the intellectual section of our nation to realize that intelligence can be aided and be trained, but no training or education can *create* it. You must breed it : that is the broad result for statecraft which flows from the equality in inheritance of the psychical and the physical characters in man."

213. The Committee have not been able to obtain decided confirmation of this view. Professor Cunningham, to whom the point was referred, said :—

"I think that the statement is a pure assumption. I do not know how we can possibly measure this supposed loss of inherited intelligence—we are dealing with inherited intelligence because all his remarks refer to inherited intelligence—and I do not think there is a single solid fact in support of such a view. I am astonished that one for whom I entertain so high an admiration as Professor Pearson should have put forward such a statement, and more especially claim for it, as he does, that it emerges from the 'calm atmosphere' which is supposed to surround the anthropologist."

Cunningham, 2270.

Adding, in reply to a further question :—

"It should be borne in mind that it is stocks and not classes which breed men of intellect. These intellectual stocks are found in all classes, high and low. No class can claim intellect as its special perquisite. This is a fortunate circumstance, seeing that the conditions which affect the degree of fertility in the higher classes are not as a rule present in the lower classes. The conditions under which genius or outstanding ability appears are peculiar and very little understood. It likewise has a residence, I believe, in no special class and very probably in no special stock. It is not improbable that the physical conditions upon which genius depends may not, in certain cases, be far removed from the domain of pathology."

Cunningham, 2271.

214. Dr. Arthur Shadwell did not think that, beyond the general fact mentioned at the outset, there was ground for the belief that the more capable among the working classes are not reproducing themselves at least in the same proportion as those less capable of putting into existence persons who are physically fit; indeed, vigour seemed to him to imply reproduction—meaning a proper fulfilment of the natural functions of which reproduction is one. On the other hand Mr. Gray, a competent witness, said :—

Shadwell, 12230-2.

"Anything which decreases the difference between the birth-rate and the death-rate among the superior classes and increases this difference among the lower classes tends to produce a progressive deterioration of the average national physique. The tendency of the population in modern industrial communities to concentrate itself in large towns and the increase of wealth appear to have the effect of reducing the birth-rate of the superior classes and of decreasing the death-rate of the inferior classes. It has been established by taking a census of the size of the families of the professional classes in the United States of America, that there has been a great decrease in the size of their families within recent times, and that these intellectual classes are now barely reproducing their numbers."

Gray, 3267.

And Sir John Gorst was impressed by the idea that the race is propagated in the greatest proportion by the least fit part of it, the restraints on marriage disappearing as you reached the most unfit.

215. The question is one which can be settled only when brought to the test of definite figures, and in view of the statements made by Professor Pearson, it might be as well if here, as in America, steps were taken to obtain, by means of a proper census, accurate information on the point.

VI. FOOD.

216. A striking consensus of opinion was elicited as to the effects of improper or insufficient food in determining physique, and this factor was acknowledged by every witness to be prominent among the causes to which degenerative tendencies might be assigned, though in one or two cases its relative importance was thought liable to exaggeration. It is in connection with the young and the conditions affecting their growth and development that the matter must be studied under its most serious aspect, and this will be dealt with in the succeeding section of the report, but in the meantime the Committee desire

Rees, 4283-8.

to consider the question in its general relation to the health of the people at large.

Close, 2556-2560,
2636-9, 2774-2780,
2796-2829.
Collie, 4041-4055.
Booth, 1087-8.
Eichholz, 436.
Fosbroke, 6691-5.

Booth, 975-980.
Smyth, 1221-2.
Wilson, 2005-6.
Malins, 3149.
Dowding, 4884.
Ashby, 8686-9.
Garnett, 9265-9274.

Young, 2093.

Hutchison, 10082-6.
Cameron, 10095-7.

Hutchison, 9991.

Young, 2093-4.
Cunningham, 2298.
Kelly, 11284,
11374-9.
Lyttelton, 5531.
Bostock, 7484-8.

Hutchison, 9995.

Mackenzie,
6814-6827.
Hutchison,
9957-9978.

Eccles, 10726.

217. Into the circumstances affecting this aspect of the subject, the habits of the community enter largely, and these it is obvious are open to a great variety of influences, moral, industrial, and economic. If, as one witness emphatically stated, with the support more or less marked of others, a large proportion of British housewives are tainted with incurable laziness and distaste for the obligations of domestic life, they will naturally have recourse to such expedients in providing food for their families as involve them in least trouble; if, as many contended, the effect of female labour in factory and workshop is to form bad wives and mothers, any changes in the industrial conditions of the people that increase the demand for this class of labour react upon the comfort of the home, and the economic causes that have contributed of recent years to the production of tinned foods in enormous quantities have had the effect of reducing the amount of home-cooking. Changes, moreover, in the relative cost of certain articles of food, whether brought about by economic or fiscal causes, give a direction to popular taste, which it may take generations of educative influence to correct.

218. If competent witnesses are to be believed, the progressive decrease in the price of certain articles of common consumption, such as tea, has not been without consequences of a prejudicial character. Dr. Purdon, of Belfast, is quoted by Dr. Young with entire approval in saying—

"People are living so much on tea and white bread and jam, instead of oatmeal and milk. They are using these cheap jams, and there is the white bread which is supplied so cheaply, which does not contain all the elements of nutrition. In former times the children used to live on oatmeal and butter-milk and potatoes, and the country children still live on that, but the town children live more on tea, and this white bread and jam. Dr. Purdon considers—and I quite agree with him—that that has a very decidedly deteriorating influence."

Evidence was, however, given that white bread properly made was as rich in nutritive properties as any form of brown bread, and the Committee must not be understood to express any opinion on the relative merits of either.

219. Dr. Robert Hutchison, whose authority on this point is unquestioned, said—

"If I were asked to state the chief fault in the diet of the working classes of this country, I should say it is the excessive use of tea and bread."

It is not so much the actual deleterious effect of tea, though on that point much evidence was given to show that in the form in which it is generally consumed it produces anaemia and neurosis, as that the money spent upon it might with much greater profit be spent on other things. Dr. Hutchison went on to say he would like to see porridge and milk substituted for bread and jam. The Bishop of Ross had the same story to tell of the Irish peasantry who have come to regard bread and tea as a higher and better class of food than potatoes and milk, or porridge and milk; a sentiment which he describes as growing more obdurate every day.

220. Both Drs. Mackenzie and Hutchison laid great stress on balance in the formation of a scientific dietary, as well as on quantity. Dr. Hutchison explained that whereas the physiological standard for a man of average weight demands 3,500 units of energy, and for the upkeep of his body 125 grammes of the chemical substance called proteid, that is to say, nitrogenous material found in certain foods, observation showed the diet of the Edinburgh labourer deficient by 280 units of energy and by 13 grammes of proteid; while in York the average diet, according to Mr. Rowntree, was 17 per cent. below standard in energy and 29 per cent. too low in proteids. The consequence of the deficient supply of energy is to lower physical efficiency and reduce the amount of work of which the man is capable. Where the amount available for expenditure upon food is limited, it is of special importance to get the proper materials, and it is in selection that the defects of English habits come out most prominently. As one witness said—

"They do not understand how to provide themselves with proper food. They may have plenty of food, but it is not proper food; it is tinned food, easily got, and badly prepared."

221. The question of tea as an article of general consumption requires a little further notice. In a statement furnished to the Committee, relating to the physical condition of the working class children in Ancoats, one of the poorest districts of Manchester, these words are used—

"Another fruitful and one of the most unsuspected causes of deterioration lies in the long ingrained habit of tea drinking at breakfast and other times in the factories and foundries of the City. Tea drinking, if it really were so, might not be harmful, but unfortunately the mixture drunk can hardly be called tea at all. More frequently than not boiling water is poured on to too large an amount of poor tea leaves and is left to stand until the tea has become almost a stew, and this dark and nasty mixture is drunk, sometimes three and four times a day, by hundreds of young lads, setting up frequently various forms of varicocele, and is responsible for several kindred evils (excessive costiveness, etc.) We were informed by the late Chief Recruiting Officer in Manchester some time ago that a very large proportion of young men rejected for the Army had been refused on account of ailments brought about by this practice."

Appendix XXII.

222. Mr. Atkins also referred to the observations of Colonel Leetham on this point. He found that a large proportion of those rejected for enlistment were heavy tea drinkers who suffered from one form or another of varicocele, and were, in consequence, unfitted for long marches.

Atkins, 2954.

223. Dr. Hawkes' experience of female workers employed in factories and workshops in Finsbury pointed to the same abuse of tea. In the case of many of these, tea is the only thing consumed before starting to their work from places in remote parts of the suburbs. During some years' work at a large Metropolitan Dispensary, he found that 80 per cent. of women and girls who came under his notice never touched solid food till the middle of the day: pickles and vinegar were then often the staple of the "solid" meal with tea, and tea again in the afternoon; three or four pints of "tea poison" being thus absorbed in the course of the day. An enormous amount of dyspepsia is thus set up, which rapidly assumes acute forms, with the result that alcohol, at first taken to allay pain, is frequently the final refuge.

Hawkes,
13110-13125.

224. With indifference as to the proper distribution of meals and gross ignorance of the right selection of foods required for them, a very general disinclination prevails to spend sufficient money upon food, even among those with ample resources. It is no doubt the case that with greater knowledge the poor might live much more cheaply than they do, but with all classes the tendency appears to be to spend as little as possible on food. Young men are said to take better care of themselves in this respect than the other sex, as they are not under the temptation to spend money in personal adornment, an object for which women will, it is said, stint themselves in food to a terrible degree, and sacrifice many other necessaries of life.

Hawkes, 13109,
13126-9.

225. The desire for pleasure is stated to be another fruitful cause of the withdrawal from working class budgets of money that should be devoted to the purchase of food. Mr. Eccles said—

Eccles, 10725.

"There is a vast deal more pleasure amongst the working classes now than there was—I mean pleasure which requires money wasted on it."

Other witnesses spoke of the taint with which the love of amusement was infecting large sections of the population, especially amusement in the form of cheap excitement, the desire for some sort of sensation, comparable to the aforesaid dietary of pickles and vinegar.

Close, 2569.

226. Betting figures prominently among pleasures of this kind, and much privation in the homes of workmen is due to losses so incurred, while on the other hand, if they win, the family dietary is not improved, but the proceeds of the successful gamble go in drink. The taste for betting is unhappily not confined to men; women, and even children, according to Dr. Hawkes, being very ready to partake of this form of excitement.

Loch, 10187-9.
Hawkes,
13091-13100.

227. In estimating the causes which contribute to render the poor careless of, or indifferent to, the conditions of proper feeding, it is only fair to remember the extreme narrowness and squalor of their surroundings. Under any aspect of this multiform problem, it is difficult to keep away for long from the housing difficulty, and it enters very largely into the matter immediately under discussion ; houses that were originally built for one family have, by the operation of pressure upon limited space and high rents, become occupied by several, but often only one room in the whole house contains a grate of proper service for cooking, with the result that a large number of tenements do not contain the requisite apparatus for the preparation of food, and the culinary art, if practised at all, is reduced to its crudest form of expression. Looking to the large rents that accrue to the proprietors of these premises by their sub-division into so many separate tenements, it does not seem too much to require that every tenement let for the occupation of a family should include a grate suitable for cooking.

Close, 2569.

228. The extent to which tinned food has superseded other kinds was the subject of some emphatic comment by a lady who claimed to know much of the habits of the people at home and abroad. In one farmhouse, notwithstanding the existence of a well-stocked garden, there was nothing but tinned vegetables and tinned fruits besides tinned food for breakfast and dinner. This she attributed partly to laziness and partly to ignorance. The nearer you come to London the more infamous, in her opinion, the food and cookery, young women caring for nothing but pleasure and amusement ; their failure to make the home attractive was, she believed, one of the causes of the rural exodus, and while on this subject she described the conditions of squalor and discomfort with which she was familiar.

Lyttelton,
5375-5382.

Lyttelton,
5391-5402.
Hutchison,
9937-9941.
9979-9981.

229. It has already been indicated in an earlier section of this report that for the purpose of bringing home to the people the importance of properly selected and carefully prepared food there is much room for training of a socially educative character among girls and young women. Both Mrs. Close, the witness just quoted, and Mrs. Arthur Lyttelton agreed that the teaching at present imparted in schools was of little value, partly because of the unpractical character given to it by some managers, but mainly because of the early age at which children leave school. The evidence, however, on this point is somewhat conflicting. Mrs. Lyttelton was of opinion that something of a different nature was perhaps more wanted, and instanced the tenement classes that have been established in New York with some success. She would like to see the people instructed in cookery in their own houses or in kitchens fitted up like those within their experience, and employing the simplest utensils ; by these means she believed they could be familiarised with processes for using up vegetable and garden stuff, which would tend to economical and wholesome living. Both she and Dr. Hutchison thought much might be done by mothers' meetings and lectures conducted on simple and practical lines, which might be supplemented, after interest had been awakened, by the distribution of leaflets, undertaken by health visitors in the employment of the local authority or acting in co-operation with it.

230. The Committee believe that all these methods are valuable : nor would the question of cost form an obstacle. In the first place it would be small, and secondly after the lapse of a few years unnecessary, as once a generation of competent mothers and housewives had been brought into being, a family tradition would be created which would contribute to preserve higher ideals of domestic comfort and better standards of life. To these ends the Committee think that a further step might be taken within the near future, and continuation classes for domestic instruction organized, at which the attendance of girls who have left school should be made obligatory twice a week during certain months of the year. The courses of instruction at such

classes should cover every branch of domestic hygiene, including the preparation of food, the practice of household cleanliness, the tendance and feeding of young children, the proper requirements of a family as to clothing, everything in short that would equip a young girl for the duties of a housewife.

231. There is no reason why a judicious discretion should not be permitted in the enforcement of compulsory attendance at such classes: girls in domestic service, for example, might properly be exempt, as the Committee were informed that comfortable homes are as a rule to be found among the working classes where the wives have had the advantage of this training; factory operatives are, on the other hand, said to make the worst wives, and to facilitate their attendance at such classes some modification of their hours of work might be introduced.

232. Further reference to the teaching of Cookery in Schools will be made in the next section, but it may be as well to lay down here the principles by which it should be guided so as to form a preparation for Continuation Classes. The teaching of cookery should be directed to the selection, economy, and preparation of the material best suited to the needs of the poorer classes, including the requirements of young children. It should have for its object the constant repetition of those processes most in request in cottage households, with a view to impressing them as firmly as possible on the minds of the scholars, and care should be taken to use such apparatus and utensils as under favourable conditions are likely to be found in the houses of the poor. The syllabus of instruction should be drawn up by some one with immediate knowledge of the wants of the class from which the children under instruction are drawn; it should vary for urban and rural schools; it should be modest in scope but thorough in application, attentive to detail, but yet based on some broad principle of domestic effectiveness; and, above all, it should provide as much practical work as possible, to the exclusion of mere excursions into theory and demonstrations which tire without exciting interest. Wherever practicable the material cooked should be served and eaten in the presence of those that have prepared it, and in all circumstances the greatest prominence should be given to the utility of the task upon which the scholars have been engaged. For this reason no scientific terminology should be introduced into lessons on the chemistry of food, but the practical value of the different articles of diet should be stated in the simplest and homeliest language.

233. No evidence was taken on Adulteration, but there is no doubt that the opportunities offered to the adulterator by the change from the home production of many articles of food to supply through the channels of trade has had a deleterious effect on public health. The Committee's attention has been called to the fact that the Board of Agriculture, under the powers conferred on it by the Act of 1899, has fixed standards of purity for milk and butter, and they cannot but think it highly expedient that the Local Government Board should, with proper expert assistance, be authorised to fix some standard, which should of course be a reasonably high one, for all foods and drinks. This has now to be done by the Public Analyst, subject very often to prolonged and costly police proceedings, and the standard arrived at necessarily differs according to the views of individuals and the strength of evidence in a particular prosecution.

234. It appears to the Committee that in regard to food, as in other matters, there is something wanting to the ideal of the Local Government Board as a department of public health, and that it is desirable that this aspect of the Board's administrative functions should receive greater attention.

235. The Committee are aware that there is nothing heroic about these remedies, but they believe that by combined pressure in the directions in-

dicated, and the enlistment of an active public sentiment in their favour, much might be done in a few years to reduce evils which are not only a standing reproach to certain classes of the nation, but constitute a serious menace to its general well-being.

VII. CONDITIONS ATTENDING LIFE OF JUVENILE POPULATION.

i. Introductory.—*Infant Mortality.*

236. Enough has already been said in the course of this Report to demonstrate the nature and extent of the waste that goes on under the name of "infant mortality," but before discussing the subject matter of the present section under certain particular aspects, the broad facts of this annual sacrifice, and some conclusions to which they point, require a little separate notice.

237. Among the more highly organised nations, where the tendency to a decrease in the birth-rate becomes more or less noticeable, the means by which infant mortality can be averted present a social problem of the first importance. Unfortunately in the volume of vital statistics, from which so many consolatory reflections are drawn, infant mortality remains a dark page. The Registrar-General in his last report lays down that "the mortality among infants and very young children has always been regarded as a valuable test of salubrity." Since the date of that report, Dr. Tatham has caused to be prepared, at the Committee's request, certain interesting statistics respecting infantile mortality in England and Wales, at two quinquennial periods a quarter of a century apart. The tables, six in number, show the mortality among male and female infants separately—(a) in town as distinguished from country; (b) among legitimate as distinguished from illegitimate infants. He has also furnished the Committee with a careful analysis of the tabular returns, and as this analysis is very full, it is only necessary to refer to the appendix, where will be found the six tables referred to, and also Dr. Tatham's remarks upon them.

238. Three facts stand out prominently as the result of this investigation: first, that infantile mortality in this country has not decreased materially during the last twenty-five years, notwithstanding that the general death-rate has fallen considerably; secondly, that the mortality among illegitimate children is enormously greater than among children born in wedlock; thirdly, that about one-half the mortality occurs in the first three months of life.

239. The evidence furnished by a variety of witnesses is confirmatory of the conclusions to which these figures point. According to Dr. Chalmers, of Glasgow, where the infant death-rate varies in different districts from 63 to 217 per 1,000 births (that for the whole city being 141), "Quite one-third of the infant deaths occur in the first four weeks of life." In certain parts of London, where the proportion of persons living in one or two-roomed tenements exceeds 35 per cent., it has already been seen that this death-rate reaches 223. Preston, with nearly half its female population occupied (30 per cent. being married), has an average rate for the ten years to 1900 of 236, Burnley of 210, and Blackburn, with a still higher percentage of married women employed, of 200. In Sheffield, where the general rate in 1901 was 201, it went up in one district to 234, and there is no doubt that, in parts of the country, during certain seasons of the year, such rates are vastly exceeded.

240. Coming to particulars illustrative of these conditions, Mr. Wilson speaking of Dundee, said: "It was quite a common thing to find a woman had had as many as thirteen children, and had lost eleven or twelve out of that number, in some cases the whole of them." Mrs. Greenwood, in a paper submitted relating to Sheffield, says: "One woman I know has buried seventeen out of eighteen children, another has had sixteen sons, of whom only six are living," though neither of them had worked out of their homes since

Appendix V.A.

Chalmers, 5958.

Appendix XIII., 4.

Appendix V., 26.

Greenwood, 8233.

Wilson, 1952.

Appendix XX.

marriage. Nor, in her opinion, is such waste necessarily connected with poverty ; deaths from diseases of the respiratory organs constantly occur owing to the practice of even well-to-do mothers exposing imperfectly-clad children to cold while gossiping with neighbours. Among a certain number of mothers questioned in Hanley and Longton, it appeared that 38 per cent. of the children born to them had died in infancy, and the state of the case in many Lancashire towns is certainly no better ; thus in Burnley one woman is said to have had twenty children and buried sixteen, all having died between one and eleven months of age ; in this case the father was a collier in good wages and the mother stayed at home. At Accrington things have become so bad as to lead to vigorous action on the part of a conference convened by the Mayor, as the result of which exhaustive enquiry into the conditions under which children are brought up has been demanded.

Appendix V., 35.

Appendix V., 49.

241. In a detailed discussion on the subject of extreme value to those who may undertake further investigation, Miss Anderson was good enough to supplement her original evidence, and the Committee fully endorse the conclusions at which she arrives. The connexion between infant mortality and (i) bad or insufficient feeding, and (ii) the overcrowding of one or two-roomed tenements, is no doubt established, but though the facts seem to point to a strong presumption that it is also connected with the employment of mothers, the information is not so complete as might be desired. Miss Anderson indicates two directions in which this information should be sought : (i) localisation of the infant mortality rates in a systematic way for particular areas in industrial towns where the workers of selected industries live ; and (ii) general infant mortality rates for selected industries throughout the country.

Appendix V.

Appendix V, 25-7.

242. The Registrar-General's records, which she points out might be available in throwing light on this important question, are confined to showing the occupations of mothers of illegitimate infants, and the Committee think that it would be well if they could be expanded to show the occupations (if any) of married mothers. In this connexion the Committee desire to call attention to a point of considerable importance. At the Brussels Congress on Hygiene in 1903, the absence of any registration of still-births in Great Britain was noticed, and the consequent difficulty of obtaining the complete figures as to infant mortality. Every witness who was questioned on the subject agreed in deplored the present neglect, and the Committee are emphatically of opinion that still-births should be registered, as apart from the advantages a system of registration would have in making it easier to bring home instances of mal-practice, a knowledge of the facts as to the frequency of still-births would be of great value towards elucidating the causes of infant mortality by throwing light on the ante-natal conditions prejudicial to the survival of the foetus.

Appendix V, 11.

Scott 1753-4.

Cunningham, 2293, 4

Malins, 3142-4.

Chalmers, 5957-8.

Niven, 6422-3.

Greenwood, 8173.

243. With a view to the protection of infant life, another point arises on which it would be expedient to amend the Registration Laws. By the system under which deaths are registered, a medical certificate as to the cause of death is not absolutely essential to the registration of a death, or the burial of a dead body, although the certificate is always asked for by the Registrar. Having regard to the heavy mortality affecting children of tender years, the Committee are of opinion that the death of no child should be registered in the absence of a medical certificate as to the cause of death. Every witness who touched the subject was strongly in favour of this amendment of the law as the best means of bringing home to the careless parent the consequences of culpable neglect.

Malins, 3142-6.
Collie, 3918-3923.
Dowding, 4915-9.
Greenwood, 8171, 2.

244. In this connexion the subject of infant insurance was also considered. As to the propriety of interfering with this practice different opinions were expressed, though it was the general view that it contributed to parental negligence. On the whole it was thought that if restricted so as to cover the actual expenses of burial its principal abuses would disappear. The evidence of Sir Lambert Ormsby, President of the Royal College of

Booth, 1016-9.
Scott, 1749.
Atkins, 2944-6.
Malins, 3136-3141.
Collie, 3916, 7.
Smith, 8497-9.

Ormsby, 12573-
12591.

Surgeons in Ireland, upon Irish practice in this regard pointed to the prevalence of a very low view on the part of many medical men in respect of their obligations toward the security of infant life under the conditions touching insurance in that country.

245. The Committee do not think that upon the evidence they are in a position to make any definite recommendation on this point, but they consider that the operation of the practice should be carefully watched.

ii.—*Hereditary Taint.*

246. So far as the Committee are in a position to judge, the influence of heredity in the form of the transmission of any direct taint is not a considerable factor in the production of degenerates.

247. Prof. Cunningham's views, that inferior bodily characters, the result of poverty and not of vice are not transmissible, were confirmed by Dr. Mackenzie, who at the outset of his interesting evidence elaborated a distinction between inheritable characters and their environmental modifications, the result of these last being imposed on the individual by his life history and not therefore transmissible to the offspring. Dr. Eichholz was disposed to go further and sought to explain how some mysterious law of transmitted impulse made for the recuperation of each generation, the unborn child fighting strenuously for its own health at the expense of the mother and arriving in the world with a full chance of living a normal physical existence. This view he supported by the assertion that the number of children born healthy in the worst districts was very great, he himself putting it at not less than 90 per cent. Dr. Ashby thought this was only partially true, as nature too often failed in its effort, and Dr. Mackenzie would not even concede so much, as investigations into the effect of food on guinea-pigs during pregnancy had, he said, shown that the embryo suffers in greater proportion than the mother. He quoted the opinion of Dr. Noel Paton that "the nourishment of the maternal tissues seems to take precedence over the nutrition of the foetus."

248. The Committee deemed it advisable to hear on this point Dr. Edward Malins, President of the Obstetrical Society of London, and Professor of Midwifery in the University of Birmingham, who thought the testimony of experienced persons was on the whole in accordance with the views expressed by Dr. Eichholz. He would say that from 80 to 85 per cent. of children were born physically healthy, whatever the condition of the mother might be antecedently, so far confirming the opinion that nature intends all to have a fair start. Dr. Malins kindly undertook on behalf of the Obstetrical Society to institute an enquiry among the Lying-in-Charities and Hospitals in London which should furnish information on these facts; this enquiry is unfortunately not complete. The Committee were, however, supplied by the courtesy of Dr. Eichholz with evidence which did tend to establish this conclusion from the Medical Officers working for the Royal Maternity Charity, and from the Paddington and Kensington Workhouse Infirmaries.

249. The Committee cannot ignore these opinions though it may well be that the depressing effects of the life-struggle on parents are, nevertheless, in some measure transmitted to the offspring. At any rate some vulnerability towards disease may co-exist with a superficially healthy appearance, and granted unfavourable environment the seeds of degeneration are not long in producing a rank harvest. The consolation of the doctrine lies in the encouragement it gives to working for the removal of the causes which are prejudicial to the health of each successive generation, an encouragement which is immensely strengthened by the concurrent testimony of all concerned as to the immediate effect upon growth and development brought about by the withdrawal of even the most unpromising material from noxious surroundings.

Mackenzie, 6742-
6781, 6900-2.

Eichholz, 556-560.

Ashby, 8671-7

Malins, 3123-9,
3203-5.

250. It must be remembered that even Professor Cunningham, while Cunningham, 2210.
denying the influence of heredity in most cases, expressed the firm belief
that diseases such as syphilis and alcoholism transmit their effects to the third
and fourth generation—and in this opinion the Committee fully concur.

iii.—*Employment of Mothers late in Pregnancy and too soon after Childbirth.*

251. A very general agreement was expressed that the factory employment of mothers had a bad effect on the offspring, both direct and indirect, but opinions differed as to the extent of the evil and the practical steps that could be taken to remedy it. It is to be found in the most acute form in the Pottery districts and in textile mills. Speaking from an extensive experience of the Potteries, Miss Garnett declared that married women's labour was really the root of all the mischief; the children are born very weakly they are improperly fed, and placed in the charge of incapable people. She admitted the impossibility of interference by any general prohibition, but thought the period during which women are not permitted to return to work after their confinement should be extended. Drs. Scott and Young, certifying factory surgeons of long standing, took the same view. Miss Anderson acknowledged the evil in evidence, but her appreciation of all the conditions of the problem led her to pause before subscribing to the prudence of any legislative change. As the result of further consideration the Committee were favoured with the Memorandum already described, in which the whole subject is discussed with a fulness of detail and wealth of information that have rendered it unnecessary to go further for the basis of the following paragraphs.

252. The existing law requires that no occupier of a factory shall knowingly allow a woman to be employed within four weeks after she has given birth to a child. Thus no legal offence arises unless the occupier, with a full knowledge of the facts, is yet responsible for the employment, a situation which, in the ordinary conditions attending factory labour, it is almost impossible to prove. It is needless to say that in these circumstances prosecutions are infrequent or abortive, and though there may be a pretty uniform observation of the law, cases in which it is broken are numerous in some districts, amounting it is thought to general evasion.

253. It has already been indicated that the extent to which the mothers of young children are employed in factories can only be roughly determined, nor are the means forthcoming for an accurate judgment of its effects on infant mortality, but the enquiries of three members of Miss Anderson's staff—in Dundee (jute), Preston, Burnley, and Blackburn (cotton), Hanley and Longton (potteries)—did lead to their noting in those towns "A very striking degree and amount of ignorance of maternal duties, especially of feeding and cleanliness." In Blackburn, Preston, and Burnley it is estimated that of women employed, 37·9 per cent., 30·5 per cent., and 33·5 per cent. respectively are married or widowed. In the several towns of the Pottery district the proportion varies from 10 to 20 per cent. The three ladies quoted by Miss Anderson were unanimous as to the stress and strain involved in the "employment of women from girlhood, all through married life, and through child-bearing"; the decreasing physical capacity of the child-bearing woman brings her at last some relief at the hands of the manager of the mill, and she is sent away, often to take up the equally unsuitable occupation of charwoman or house-scrubber. In this connection Miss Paterson says—

"Great harm is done and suffering occasioned to the women by their remaining at work too long before confinement as well as by their returning too soon after it. Factory managers, doctors, health visitors, and workers themselves are agreed that the four weeks absence is often shortened to three or even less."

254. As an instance of the lack of sufficient care for the children that follows, a subject on which she was able to form very definite ideas, she gave particulars of 144 cases where the health visitors found two, three

Garnett, 9015-9034,
9116-9122, 9345-
9367.

Scott 1834-8, 1888
1901.
Young 2169-2172.

Anderson 1590-1613
Appendix V.

Appendix V., 3.

Appendix V., 14.

Appendix V., 16.

Appendix V., 31.

Appendix V., 32.

or more very young children left alone in the house (in some cases locked in) while the mother was at the mill, with only such food as the mother could prepare over night or in the early morning before leaving. Definite arrangements with another woman to take charge of the children seem less common in Dundee than in Lancashire and the Potteries. It was stated by two doctors in Preston that a large number of premature births were attributable to continued work in the mill during pregnancy, and members of the profession in Blackburn held that the evil of the employment of women during that period was aggravated by their desire to earn as much as possible before they are forced to give up work. In Preston it is found that factory operatives are in the habit of nursing their babies at meal times, and before and after the day's work at the mill; but in Burnley this is exceptional, while greater ignorance and unintentional cruelty in the giving of unsuitable food seem to be common. In the Potteries Miss Martindale notes the effects on infant life of improper feeding and the "appalling ignorance and objections to being taught."

Appendix V., 35.

255. Coming to the causes that render the labour of mothers necessary, Miss Anderson enumerated them thus:

Appendix V., 37.

- (i.) Death of father, or lack of employment, or inadequacy of father's wage.
- (ii.) Desertion of father.
- (iii.) Fear on mother's part of loss of future work in factory.
- (iv.) Preference for factory over domestic work.

Miss Anderson points out that some of these causes may be traced to the concentration of women's industries in districts where there is absence of men's occupations, and, so far as these are due to economic and social circumstances not immediately alterable, she considers that more may be effected, and the operation attended with fewer counterbalancing disadvantages, by working towards the mitigation of the results of the employment of mothers than by any attempted diversion thereof on a large scale. The great majority of cases may be said to fall under one or other of the three sub-divisions in class (i.).

256. Dundee and Preston resemble each other in scarcity of employment for men.

Appendix V., 40.

Miss Squire, speaking of Preston, says,

"The men are said to look out for a wife who is a four loom weaver, and they have the reputation of being lazy."

It was also found that the husbands of cotton operatives were chiefly employed as labourers in intermittent work, while

"in all cases when the husband was in regular employment as weaver, platelayer, painter, bricklayer, etc., the one wage was insufficient to keep the family at the standard of life they expect."

It must be admitted that the standard is somewhat exacting, as the husband insists on having his spending money whatever the household needs may be, and, therefore, the mother's wage, over which she has control herself, proves a valuable accessory.

Appendix V., 45.

257. Miss Squire proceeds,

"The general opinion, among those best qualified to judge, seems to be that the working classes are well off, and that if it was not for the proverbial improvidence of the cotton operatives there would be no poverty. Still, it seems to be the practice for the women to continue their work in the mill as near to the time of confinement as the manager will allow; always the same complaint being made that he had to keep watch and tell the woman that she must cease work."

Appendix V., 47.

258. In Blackburn, Miss Squire finds a high standard of life among textile operatives; comfortable homes, and money to spend on excursions,

holidays and amusements, are considered essential. Of Burnley, it is said that

"The infants are of a miserable, debased type in a large number of cases. Whereas, in Appendix V., 48. Preston, the important point seems to be that the infants should be properly fed, in Burnley it seems as if no amount of nourishment could build up a healthy child."

Poverty and desertion are there the causes of the mother's early return.

259. In the Potteries the lack of regular employment for men is a serious element in the situation. According to Miss Martindale, the early return to work is in very many cases prompted by necessity, but she goes on to say, Appendix V., 50.

"It is impossible not to be impressed by the universal preference amongst the women for factory over domestic life, and how depressed and out of health they became if they were obliged to remain at home."

Analysing the causes of this preference for factory life, Miss Martindale adds :

"Surprising as this appears at first, it becomes less so on consideration. At 13 years of age the majority of these women would have begun to work in a factory, to handle their own earnings, to mix with a large number of people with all the excitement and gossip of factory life. They would thus in most cases grow up entirely ignorant of everything pertaining to domesticity. After marriage, therefore, it is hardly probable that they would willingly relinquish this life to undertake work of which they are in so large measure ignorant, and which is robbed of all that is to them pleasant and exciting. Until as girls they have been taught to find a pleasure in domestic work, and until there is a greater supply of healthy and suitable recreations and amusements in the reach of all women, to counteract the prevailing squalor and gloom of these Pottery towns, it is useless to expect them to relinquish factory life."

260. The Committee have no doubt that the employment of mothers in factories is attended by evil consequences both to themselves and their children, and they would gladly see it diminished if not altogether discontinued ; but in approaching a discussion of the remedies that have been suggested, they are convinced of the necessity of extreme caution. They have been reminded of (1) the enormous practical difficulties that would accompany any sort of legal prohibition : (2) the existence of a considerable number of unmarried mothers without means of support, whose main chance of rescue from degradation lies in the fact that they desire to labour and know they ought to labour in support of their infants ; and (3) the presence in certain populous industrial districts of a large proportion of married mothers who are necessarily the chief breadwinners of their families, and the danger that, if deprived of the opportunity of earning a wage, means will be taken to prevent these families coming into existence ; they also feel that the right of married women to the fruits of their own labour, secured to them under the Married Women's Property Act, ought not to be lightly interfered with.

Appendix V., 52.

261. Even Miss Garnett, who was most strenuous in condemning the Garnett, 9118. whole practice, admitted that the time was not ripe for prohibition.

Among other witnesses, Dr. Scott would prohibit all employment of married women in factories, unless the children are absolutely dependent on their wages. In that case he thought the municipality must make provision for the care of the children while the mother is at work. Mr. Wilson and Dr. Malins agreed that there would then be good cause for such assistance. Dr. Young would extend the period of exemption to two months before confinement (or three in some cases) and three months afterwards. (In Switzerland the period is two months both before and after confinement.) Dr. Ashby would extend it as far as possible, but saw the practical difficulty in regard to pregnancy that the exact date of the child's birth is not easy to predict, and that this would be a loophole of evasion for both employer and employed. He instanced illegitimate children as suffering most, because the mother so often has to go to work. He also discussed the question of licensed women for the care of infants when mothers went to work, but preferred the crèche.

Scott, 1834-8,
1888-1901.

Wilson, 2039-2042.
Malins, 3210-2.
Young 2169-2172.

Ashby 8678-8689,
8785-6,
8800-9.

262. The Committee are not able to recommend prohibition, nor do they advocate any uniform extension of the period, but it does seem to them that the application of the law, as it stands, might be made more regular and elastic.

The extension of the period at present prescribed, which is less than that in many European countries, would probably be made the occasion for more wholesale evasion, and the Committee think the alternative lies between (*a*) maintaining a hard and fast line and placing upon the employer the burden of obtaining proof that the required period has elapsed since the confinement of the woman he employs, and (*b*) exacting in all cases of pregnant or recently delivered woman (1) a medical certificate from an appointed person, say the Certifying Surgeon of the district, that they can be employed without serious prejudice to their physical well-being, and (2) proof that in their absence reasonable provision is made for the care of their infants, which might take the form of a crèche established under municipal or private management, or be secured by the recognition for the purpose of a duly licensed body of women. The latter plan seems open to the least objection, provided a proper licence is assured, but the two might subsist side by side.

Appendix V, 55.

263. Another source of amelioration is suggested by Miss Anderson, who notes the general neglect of voluntary agencies for helping mothers before, during and after confinement, to take care of infant life, even where such agencies exist. In Lancashire, where, it is said, insurances of all kinds abound, no form of provident society exists to which women could contribute while still able to earn wages, nor has any attempt been made to organize a maternity fund, towards which both employer and employed might contribute. The existence of such a fund at Mulhausen is said to have resulted in the reduction of infant mortality by half. The Committee would strongly urge the adoption of such methods of voluntary assistance, and think it not improbable that endowments may be found in many places which could be utilised as the nucleus for a considerable amount of charitable effort in this direction.

iv.—Decrease in Breast Feeding—Defective Milk Supply.

264. A decrease at the present time in breast feeding is generally admitted to be the case in all classes of society, at any rate in the urban districts. With the poor, it seems fair to say that their failure in this respect is due to inability rather than unwillingness, especially in view of the fact that as long as it can be properly continued breast feeding is much the most economical way of nourishing an infant. It is, however, no doubt, the case that women are often unwilling to nurse their own children, because it interferes with their going to work, and witnesses were found to say that in the absence of such excuse mothers were often neglectful of their duty from sheer indifference or weariness.

Cunningham, 2198-9

265. The heavy rate of infant mortality is said to be in large part due to the fact that infants are now-a-days seldom fed from the breast, in which connection Mrs. Watt Smyth gave some figures for the sixteen months ending January 1st, 1902, derived from one of the institutions for the *Surveillance de Nourrissons*, maintained by the *Conseil-Général de la Seine* and administered by the *Assistance Publique* of Paris, wherein it appears that among the children breast fed, being 45·4 per cent. of the whole number, the death rate was 2·6 per cent.; among 35 per cent. artificially fed the proportion was 10 per cent.; and among 19·6 per cent. with mixed feeding, 6 per cent.

266. It was also stated by the same witness that in Liverpool, Dr. Hope, the Medical Officer of Health, made an inquiry a few years ago and found that for every death from diarrhoea which occurred among breast-fed infants under 6 months old there were 15 among those fed partly at the breast and partly on artificial food, and 22 among infants fed entirely on artificial food.

Lyttelton, 5365.

267. It must not, however, be understood that the neglect is universal; on the contrary, Mrs. Lyttelton said that country women usually suckled their

own children, with which statement Mr. Fosbroke and Mrs. Watt Smyth appeared to agree; though with country women the process is often continued too long in the mistaken belief that it keeps off pregnancy. Mrs. Greenwood gave some figures showing that out of 725 infants visited in Sheffield nearly 79 per cent. were being fed from the breast alone; but these infants were visited within a week of registration, and it is therefore doubtful for how long they were so fed. Moreover, a medical officer in that town quoted in a lecture by Dr. Jones and referred to in his evidence, has stated that only one in eight of infants born in Sheffield is brought up at the breast. Dr. Eustace Smith, to whom this difference of opinion was submitted, said, "Sometimes they nurse their children for a month or two," and was quite definite that a very small proportion of babies brought to the East London Children's Hospital are suckled. In Dr. Hutchison's opinion it hardly counts unless a child is suckled for at least six months. Dr. Ashby said the women try to suckle their children; but if they are going to work they soon stop. It was on this account that Mrs. Watt Smyth strongly advocated the extension of the period within which a woman was allowed to return to work, as in her view a limit of three months would give a woman time to take an interest in the development of the child, whereas if she feels she must go back in a month she does not deem it worth while.

268. But whatever may be the case in certain districts, or whatever may be the cause, it is quite certain that there is a great decrease in breast feeding, notably in towns, testified to by a number of the most competent witnesses. The evidence of Dr. Hutchison in this regard is of special interest. He says that the fact is common to all highly civilised people, but the medical profession are in ignorance as to reasons for this disability of mothers. He notes a better state of things among the Jews, which may be connected with the abstinence from labour of Jewish mothers. Sir Charles Cameron appeared to think the Irish better off in this respect, but he admitted that the milk was not of good quality and that many of the women were taking a great deal of whiskey. On the other hand, Dr. Kelly, Bishop of Ross, declares, "The practice (of suckling) is fast dying out," and Dr. Browne testifies to its disappearance in manufacturing towns.

269. It is obvious that in these circumstances the question of the possible alternatives to breast feeding becomes of the greatest importance. The Committee are informed by the highest authority that modified cow's milk is by far the best. The patent foods so largely in use are stated by Dr. Hutchison to present certain marked inferiorities to milk as a means of nourishing children: most of these are deficient in fat, and a considerable number contain unaltered starch, which, being incapable of digestion, produces diarrhoea and irritation of the bowels, a condition which naturally leads to impairment of growth and consequently defective physique.

270. It must not, however, be supposed that these foods enter into competition with cow's milk among the poor, as, in fact, they are more expensive and beyond their reach except in a very diluted form. The substitutes they employ are still more deficient in nutritious properties, and much more favourable to the production of every variety of intestinal disorder. In most cases tinned milk is the only expedient. This in a proper state and of a good kind is not deleterious, and there are obvious reasons of convenience why it should be preferred; but at its best, judged by its value as food, it is three times as expensive as cow's milk and is often of inferior quality and always liable to pollution. The vessel once opened is exposed to every kind of bacterial contamination, and by the time it is exhausted all sorts of foul ingredients have been conveyed into the child's system. When tinned milk is not in use, highly diluted and probably sour cow's milk, in which groats or bread have been soaked, is employed instead. It is needless to say that in such circumstances the worst effects of mal-nutrition make themselves manifest very soon, and the condition of the unfortunate child is not improved by the practice begun very early in its career of encouraging it to eat whatever may be included in its parents' dietary.

Fosbroke, 6623.
Smyth, 1240.

Greenwood 8177.

Jones, 10889.

Smith, 8435.

Hutchison, 9912,
10019.
Ashby, 8708.

Smyth, 1225.

Eichholz, 636.
Collie, 3908, 9.
Garnett, 9207, 8.
Eccles, 10724.

Hutchison, 10029-
10038.

Cameron, 10985, 6,
11084.

Kelly, 11247.

Browne, 9690.

Hutchison, 9920-3.

Lyttelton, 5371.
Chalmers, 6027.
Fosbroke, 6702.
Greenwood, 8238-
8245.

Eccles, 10755.
Hutchison, 10093-6.

Dowding, 4921-4.
Eves, 7644, 793.

Smith, 8454.

Defective Milk Supply.

271. The importance of being able to obtain a sufficient supply of good cow's milk being thus emphasised, the Committee are confronted with a great deal of evidence to the effect that it is next to impossible to ensure such a supply, at any rate to the poorer classes. It is not a little curious that, while people in the rural districts have a growing difficulty in obtaining milk because it pays better to send it into the towns, the great mass of the dwellers in towns are in no better case than formerly. There is in fact a great lack of organisation in the distribution of this prime necessity, a great want of knowledge as to its value, and very inadequate means for its preservation from the most obvious sources of pollution. Mrs. Watt Smyth called special attention to this subject, and her evidence was full of the strongest allegations against the cleanliness of the persons from whom the milk comes and of the processes by which it is treated. Thus—

Smyth, 1247.

"It is a fact that the milk when it arrives in large towns has been proved to be putrescent. I mean it goes through so many stages, from the country farm to the towns, that it is badly contaminated. But that is not the worst of it. The farms are in such a filthy condition that the milk when it leaves the farm is already poisonous. I have been over many farms, and the conclusion one must come to is that at the bottom of the whole question is the filth of the farms."

And again—

Smyth, 1347.

"The cows are in the most filthy condition, standing in manure, and the cow-sheds, the stalls, are covered with manure; and outside the yards are heaped up with it. There is no proper ventilation, the milkers are filthy, their hands and clothes are dirty, and their vessels very often are dirty."

Smyth, 1350.

272. In another case Mrs. Smyth detected hair and faeces in the milk, which the boy in charge took quite as a matter of course because it came off the cow. These allegations Mrs. Smyth declined to admit were only applicable to a few farms. On the contrary she believed that the great majority of farms from which the milk supply was obtained were of this character. It is only fair to say that from his experience at Birmingham Dr. Malins was not prepared to support Mrs. Smyth's indictment, but he could not state whether any precautions were systematically taken to see that the dairies from which the city received

Malins, 3220, 3235.

its supply were under proper supervision; Mr. Fosbroke's evidence that the County Council of Worcestershire had been urging this duty on the District Councils implied the presence of much neglect, and Dr. Ralph Vincent's description of the steps taken in the model farm connected with the Infants' Hospital at Hampstead indicated with much clearness the deficiencies of most farms in this respect. These conclusions were borne out by a report on the milk supply of Finsbury in the course of an inquiry conducted by Dr. Newman, the Medical Officer of Health.

The report runs,

"There is evidence to prove that as a general rule the country cowsheds from which the milk is derived are ill-lit, over-crowded, badly ventilated, and badly drained. There is little or no guarantee that the milk is derived from healthy cows."

273. The remedies for this state of things are, first, the general application of the permissive provisions of the existing law under the Contagious Diseases (Animals) Act, 1878. The Local Government Board may make orders for :—

- (i) Registration of cowkeepers, dairymen, etc.
- (ii) Inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage and water supply of dairies and cowsheds.
- (iii.) Securing the cleanliness of milk stores, milk shops, and vessels.
- (iv.) Prescribing precautions to be taken for protecting milk against infection or contamination.
- (v.) Authorizing a Local Authority to make such orders.

The Committee think that in the event of the Local Authority not making such orders the Local Government Board, who, it is understood, have already issued model bye-laws for urban and rural districts respectively, should make the orders themselves ; or if it was deemed preferable to bring indirect pressure to bear, the power now enjoyed by a local authority under the Infectious Diseases (Prevention) Act, 1890, for prohibiting the supply of milk from an infected dairy might be extended so as to cover exclusion of supply from areas where provisions of the Contagious Diseases (Animals) Act are not in operation. Under either alternative the County Council should be empowered to act in default of the Local Authority, and in either case it should be the duty of the Local Government Board to intervene in the ultimate resort.

274. Nor are the risks of contamination at an end when the milk has left the farm. Owing to the distance from which the supply is drawn and the number of hands through which it passes, these are numerous ; to quote Mrs. Smyth again :

"Dr. Priestly, medical officer of health for Lambeth, has stated that much of the milk consumed in the poorer quarters is three or four days old, and probably Lambeth is not the only district in which this state of affairs exists. The milk has passed through the hands of three or four dealers by each of whom a dose of some preservative has been added in order to prevent the actual onset of decomposition. The mischief is caused by the many hands through which it passes. If there were some system of collecting milk in the country and sending it straight to milk depots it would be better."

Smyth, 1267.

In Dr. Newman's report it is stated under this head :

"52 per cent. of the milk shops in the Borough were found to have one or more sanitary defects, and 73 per cent. of the milk vendors fail to keep their milk covered or protected from dust. Further, 48 per cent. of the shops where milk is sold are small general dealers, doing a daily milk trade of only a few quarts or pints."

And again,

"There is reason to believe that Finsbury milk and milk generally in London contains great bacterial contamination. Four unpreserved samples of milk, selected from two good class and two poor class milk shops, gave an average of 2,370,000 bacteria per cubic centimetre, which is about 2,000,000 bacteria in excess of what should be present in good fresh milk. Of 25 milks examined in Finsbury in 1903, 32 per cent. contained *pus* and 40 per cent. contained dirt."

275. Things may be better or worse in selected localities, but the Committee have no reason to think this is an overstated account of the general condition. In proof of the extreme ignorance that prevails even among the better class of dealers as to the precautions that should be taken to preserve the purity of milk, Dr. Vincent instanced the practice of a prominent dairy company in keeping a wide bowl of milk standing on the counter of a shop in the West End within a few yards of a continuous and dense traffic. This they label "Pure Milk," whereas from the wide surface exposed to contamination it is imbibing the maximum of bacterial poison, and in Dr. Vincent's emphatic words "should be pitched down the drain." "It is perfectly incredible," he adds, "how milk companies could act in this way."

Vincent, 12066

276. The evil is not at an end when the milk reaches the home of the consumer. A pure supply may be rendered injurious by dirt in the house, the proximity of contaminating articles, the general ignorance, in fact, that prevails as to how milk should be stored and the conditions under which it is fit for use. One fertile source of contamination was said to be the use of the feeding-bottle with a long indiarubber tube, which it was impossible to keep clean. Dr. Hutchison would like to see the use of this tube made illegal, as he believes it is in France, and is certainly in some of the States of America.

Hutchison, 9984-9.

277. The real remedy, however, is to be sought in that social education already described, by means of which, at first in the school and afterwards in continuation classes, and finally by the fostering care of philanthropic and municipal agencies, the foundations of maternal competence may be laid. The Committee had their attention called to a document issued by the Health Department of the Corporation of Sheffield, entitled "Advice on the Feeding and Rearing of Infants," and to another emanating from the Wakefield and

Appendix XVIII.

District Sanitary Aid Society, "How to Rear a Healthy Baby," either of which might be made the model of similar admonition elsewhere. Dr. Hutchison thought systematic instruction of mothers in the methods of feeding and rearing of the first importance; he believed they were in most cases willing to learn, and recommended the issue in all towns of leaflets by the Registrar on the registration of every infant, as was said to be the practice in France, and as had been done for twenty years in Glasgow.

Hutchison,
9937-9941,
9979-9981.
Chalmers, 6076-9.

Atkins, 2938.

Smyth, 1299-1315.

Young, 2122-7.

Collie, 4204-9.

Chalmers 6069-6081.

Niven, 6340-5.

Ashby, 8791, 8852-
8874.

Smith, 8458-8463.

Hutchison, 9925-9.

278. The crux of the question lies in the steps that should be taken to bring an adequate supply of pure milk within the reach of the poorer classes. The Committee have had before them schemes for the organisation of this supply by municipal action, the agency of hospitals or charitable societies, or some better adaptation of trade methods. A good account of the system adopted at Battersea was given by Mr. Atkins. It is claimed for it that it has already had an effect in reducing infant mortality, and will be self-supporting when its area of operation is sufficiently extended. The securities taken against contamination seem adequate. Mrs. Smyth described the methods pursued in Paris, both commercially, by an organization under the direction of Dr. H. de Rothschild, and municipally by the *Assistance Publique*. Both these work under medical supervision, and their operations include the periodical weighing of the children fed thereby. In Liverpool the scheme is directed towards "the supply of sterilised milk to poor people at a nominal price," and it was deemed by Dr. Young that the municipality had thus reduced very largely infantile mortality from diarrhoea in the summer. Dr. Collie was an advocate of such a system and thought it could be made self-supporting, and Dr. Chalmers explained the steps that were being taken to organize it in Glasgow. On the other hand Dr. Niven was rather inclined to deprecate municipal activity in such a field, and Dr. Ashby held that the municipality weakened their position as censor if they assumed the functions of trader, and thought much could be done by helping the people to help themselves and by improving the commercial channels of supply. Dr. Eustace Smith informed the Committee that an attempt was about to be made by the East London Children's Hospital to organise a proper milk supply. The milk will be brought from farms kept under strict supervision and it will be kept under supervision the whole time it is in the hands of the Hospital authorities, and will be sold as cheaply as possible. Dr. Smith believes that the scheme will be self-supporting, and anticipates a large sale owing to the willingness of parents to take advantage of the instruction given by the hospital in the shape of leaflets. Dr. Hutchison, however, saw a good deal of difficulty in the general adoption of such a system. Hospitals were for the most part non-local, and he would rather look to improvement in the ordinary commercial supply. On the whole it seemed to him that concerted action might be brought about in which municipalities, hospitals, and charitable agencies might all bear a part and prepare the way for the introduction of better commercial methods.

279. It is of great importance, with a view to enforcing responsibility and guarding against contamination, that the milk supply should pass through as few hands as possible. It has already been shown that milk vendors are often general dealers whose sale of milk is confined to a few quarts, and in the interests of public health this practice should cease. With the formation of a sufficient number of milk depôts, the machinery of registration and of municipal health visitors could be utilised to bring to the knowledge of mothers of young children where supplies of milk could be obtained, and to the spread of this knowledge hospitals and infirmaries in the district could contribute their share. By these means the Committee believe the difficulty of milk supply could be got over without recourse to direct municipal action, but they think that in all improvement Bills promoted by Local Authorities, the insertion of provisions dealing with the milk supply within their area should be insisted on.

Vincent 12061-4,
12137-12143.

280. The problem of providing *ab initio* for the purity of the milk is not so easy: most of the witnesses appeared to think that sterilisation did secure this object; but Dr. Vincent, who gave evidence late in the enquiry,

condemned the practice *in toto* on the ground that it reduced the nutritive value of milk to a minimum, and was calculated to cause a scorbutic condition. The Committee do not feel themselves qualified to determine a point on which professional opinion is so acutely divided, but having regard to its importance and the very general belief that by means of sterilisation the best conditions under which a supply can be organised are secured, they think that it should be made the subject of a special investigation by a small body of experts. They have no doubt, however, that Dr. Ashby and Dr. Vincent are right in holding that the first step to be taken with milk on its leaving the cow is prompt refrigeration to a temperature of 40° Fahrenheit.

Ashby, 8874.
Vincent, 12073.

281. It is obvious that the enforcement of this practice would stand in the way of the small cow-keeper sending his milk to the agents of the great collectors who serve the urban market, but looking to the alleged scarcity of milk for the consumption of the poor in rural districts, it might be a good thing if these persons were confined to the sale of what they produce among their own neighbours, where it would be rapidly consumed, and the supply of the urban market thus left in the hands of producers with sufficient capital to take a precaution which the Committee believe to be an essential preliminary to the protection of milk from pollution.

v. Parental Ignorance and Neglect.

282. These failings have not escaped illustration in the preceding subdivisions of this section; unfortunately they are not confined to the subject-matter therein treated, but touch every aspect of child-life. The fact of ignorance and neglect on the part of parents is undisputed, and is testified to by a crowd of witnesses. It is not, perhaps, easy to determine how much of this neglect springs from ignorance and how much from callousness; observers are indisposed to take a view that would appear to press hardly on persons the conditions of whose lives are unfavourable to the development of the domestic virtues, and many testify to the willingness of the poor to learn and to a tractable disposition in contact with judiciously tendered advice; but, at the same time, there is no lack of evidence of increasing carelessness and deficient sense of responsibility among the younger women of the present day, which is a discouraging sign, especially as these features are said to exhibit themselves in the country as well as in the towns. Apart from the effects of extreme poverty, alcoholism and love of ease are contributory causes on which many witnesses laid stress. Mr. Booth admitted a growing disinclination to attend to domestic duties, and Mrs. Mackenzie's description of certain classes in the Canongate, Edinburgh, pointed to a degree of indifference which amounted to positive inhumanity.

Booth, 1087-8.

Mrs. Mackenzie,
7034.

283. In certain overt directions, the disastrous consequences of this neglect are very palpable. Thus overlaying is described as frequent, and is the result of carelessness or drunkenness, the cases generally occurring between Friday night and Monday morning. The practice of placing a small child in bed with older people is, perhaps, sometimes defensible on the score of warmth, but it should be discouraged, and health visitors might properly point out its dangers, while, at the same time, indicating that next to no cost would be incurred by providing a suitable box in which a child could sleep with safety.

(a) Overlaying.

Atkins, 3002-5.
Malins, 3147.
Greenwood, 8165-7.
Smith, 8507-8

284. The instances in which children are left alone in a room with a fire unprotected by any guard are said to be very numerous. During the years 1899 and 1900 inquests were held on the bodies of 1,684 young children whose deaths had resulted from burning, and in 1,425 of these cases, the fire which caused the accident was unprotected by a guard. Mrs. Greenwood stated that in the leaflets distributed in Sheffield, "On the Care of Infants and Children," warning was given on this point, showing the picture of a fire-guard, but she had never known one bought as the result of the warning, and thought they could only be brought into use by the inclusion of provisions in the building bye-laws.

(b) Fire.

Booth, 1008.

Greenwood, 8163-4.

(c) *Ventilation.*

Lyttelton, 5454-6,
5480-5.

Ashby, 8700;
8723-5.

(d) *Want of Cleanli-*
ness.

(e) *Insufficient*
Clothing.

Deverell, 7998-9.

(f) " *Comforters.*"

Young, 2117.
Greenwood, 8197-
8200.
Ashby, 8907-8911;
8918.
Garnett, 9211-4.

(g) *Sleeplessness.*

Rees, 4418.

Mackenzie, 6835-8.

(h) *Indifference to*
slight ailments.

Deverell, 8006.

(i) *Improvidence.*

Loch, 10185-9.

Chalmers, 6051.

Eichholz, 436, 7.

285. The lack of ventilation and ignorance of the value of keeping windows open—not only in schools but at home—has been mentioned as having a very deleterious effect on child-life. Thus Mrs. Lyttelton said that “not one person in a thousand understands the value of fresh air,” and she thinks cottagers get less air than they used because the cottages are less draughty. Dr. Ashby alluded to bad ventilation in the houses as a particular in which mothering was deficient, and classed it with want of cleanliness and badly fitting and insufficient clothing. In this last connection Miss Deverell, Inspector of Schools, confirmed the remark of Mr. Booth that the poor did very little mending, by stating that in many households there is no such thing as a needle and cotton, and mothers made no attempt to mend their children’s clothes. Weight, in their opinion, is the only criterion of warmth: children are often without underclothing at all, and their outside garments are both ragged and filthy.

286. One of the most noxious practices described is the habit of giving infants india-rubber nipples to suck; this habit appears to be very common, and was most strongly deprecated. It has the effect of causing contraction of the roof of the mouth and the air passages at the back of the nose, which is prejudicial to proper breathing, and is also instrumental in introducing foul germs into the system by virtue of the dirt accumulated. The first of these evils was illustrated by Dr. Young, the second by a number of witnesses.

287. Much evil arises from the chronic sleeplessness fostered by the conditions of life so largely prevalent. The lack of sleep from which town children suffer was mentioned by several witnesses as a cause of degeneration. “One of the great contributory causes of physical deterioration,” says Mr. Edwards Rees, “is the fact that the children do not get enough sleep.” Children in the slums are habitually up till very late at night. This is attributed by Mr. Edwards Rees more to parental carelessness than to the fact that the children would not go to sleep, even if they were put to bed, by reason of the noise and overcrowding, and so on; “for,” he says, “children easily get accustomed to such surroundings;” but the conditions under which many of them are compelled to exist must render sleep very troubled and broken. Dr. Mackenzie attributes to sleeplessness the prevalence of irritability and nervous exhaustion.

288. Very little knowledge is moreover found among mothers of the slighter ailments to which children are prone, and precautionary measures are rarely taken until they have reached an aggravated stage. The improvidence of the poor is another circumstance responsible for much juvenile suffering. Money, when plentiful, is spent on luxuries or absorbed in the pursuit of pleasure, and when the pinch comes the children are the first to feel it. Mr. Loch drew attention to the higher rate of wages and also to the decrease of child pauperism; but he said that “when the higher wage has not been combined with a better power of using the wage the children have not come off better,” and Dr. Chalmers stated “that there is no relation between the total earnings of the individual householder and the quantity or the quality of the food going into the household.”

vi.—*Feeding wrong in time, in kind, and proportion.*

289. The general aspect of the feeding problem is discussed under a previous heading of the report, and the questions of milk for infants and feeding of children at schools under sub-sections of this heading, but looking to the extreme importance of nutrition in relation to the young, the subject requires some special notice among the factors that make for juvenile degeneracy. With the single exception of Mr. Edwards Rees, whose panacea is fresh air, all the witnesses concurred in claiming the first place for food. “Food,” says Dr. Eichholz, “is the point about which turns the whole problem of degeneracy.” There is, first, the want of food, secondly, the irregularity in the way in which children get their meals, and, thirdly, the non-suitability of the food when they

get it; and these three circumstances, want of food, irregularity and unsuitability of food, taken together, are, in his opinion, the determining cause of degeneracy in children. Describing their dietary, he says:

"Their breakfasts are nominally bread and tea, and the dinner nothing but what a copper can purchase at the local fried fish shops, where the most inferior kinds of fish are fried in reeking cotton-seed oil, and this often supplemented by rotten fruit collected beneath coster's barrows."

290. Meat may be had in small quantity and of a poor sort on Sunday, but according to this witness the absence of milk and meat is most important in determining degeneracy in the poorer areas. The tea it must be added is probably in the dangerous form already mentioned, having been brewed in the morning and been allowed to stew throughout the day. Dr. Scott instanced a child in Arran who died the victim of his parents' special kindness in this respect. Mrs. Close thought children would be better brought up on beer than the tea they get. Dr. Collie considered it most deleterious, and evidence to the same effect was given by other witnesses. The growing consumption of tinned foods and its coincidence with the decrease of cookery at home press with exceptional severity on the young. Sir Frederick Maurice laid stress on this as a serious factor in the situation. Few of the mothers in the poorer districts, according to Mrs. Bagot, do much cooking; tinned foods or bad fried fish are the alternatives, and if the mother does do any cooking it is only for the father, and the children have to eat what he does. Thus Miss Garnett cited a case where a baby, who was very ill, had been fed on tinned salmon and orange juice, and Mrs. Lyttelton described the regrets of a country holiday child for its "tasty" supper, which on enquiry proved to vary between bloaters and a halfpenny saucer of pickles.

291. In the course of Sir Frederick Maurice's investigations, he gathered "universal testimony" that it was the habit of parents to feed children off their own plates, and this would ordinarily include raw herrings, pickles, fried fish, and the like. "They live as we do," was quoted by Mr. Fosbroke as a common saying.

292. With the prevalence of such ignorance, it is needless to say, no balance or proportion enters into the calculations of those who cater for the wants of the young. The greater cheapness of many articles of consumption—meat, for instance—has brought them much more largely within reach of the poor but there has been no corresponding increase of knowledge as to the economic expenditure of money on wholesome food; indeed, the general consensus of opinion collected from every variety of witness points to the conclusion that in no branch of domestic life is the English housewife so deplorably destitute of the necessary equipment.

REMEDIAL MEASURES FOR THE ABOVE ADVERSE CONDITIONS.

293. It is clear that the evils, which it has been the object of the preceding sub-sections to summarize, can only be dealt with as part of some great scheme of social education, to which many agencies must contribute, legislative, administrative and philanthropic, and by which the people themselves must be induced to cast off the paralysing traditions of helplessness and despair.

294. Later sub-sections will deal with what, in the Committee's opinion, may be done in school and during the period between the close of school life and adolescence to raise the standard of domestic competence and ideals of home life, and in this they believe lies the principal hope for future generations; but it is not too late to do something to rescue the present generation from the consequences of past neglect, and to that end the subjoined observations and recommendations are directed.

295. An enactment placed on the Statute Book so recently as 1902 offers an opportunity to the Local Authority that should not be missed. Under the Midwives Act of that year, which places in the hands of County Councils, or any District Council to which they may delegate their powers, the general supervision of all midwives practising within their area in accordance with rules to be laid down under the Act, rules have been made and approved

by the Privy Council by which every midwife is made responsible for the cleanliness and is enjoined to give full directions for securing the comfort and *proper dieting* of the mother and child during the lying-in period, which, for the purposes of the regulations, is held to include a period of ten days after delivery. It is obvious that as women trained under the Act take the place of the illiterate, incompetent persons that very generally look after the poor at this critical point of their lives, a great opportunity is offered for giving mothers the information wanted and providing the newly-born infant with a fair start. If the Local Authority make use of this agency, which is entirely under their control, for the dissemination of proper knowledge and practical advice, a considerable step in advance will have been achieved. Models for maintaining and improving upon this step already exist, and only require careful study and a genuine faith in the value of social education, to be brought into general use.

Eves, passim.

296. Direct evidence on the value of crêches as places of instruction for mothers was given by Miss Eves. She thought education of young women in the care of infants in the strictest sense technical education, and advocated the establishment of centres for the purpose under the Local Education Authorities.

*Worthington, passim
Bostock, passim*

297. A large body of evidence was tendered as to the organisation and operations of the Manchester and Salford Ladies' Public Health Society, and the Committee had the advantage of examining on the subject Mrs. Worthington, one of its principal members, and Mrs. Bostock, one of the Health Visitors it employs. The Society, which has been in existence for more than twenty-five years, has for its object the discovery of all those conditions that are adverse to public health, and especially the bringing within the knowledge of the mothers among the poor such information as will enable them to do their duty by their children. The poorer parts of both towns are divided into districts, each under the supervision of one or more of the ladies who constitute the Society, and, subject to their directions, a number of Health Visitors, who are in part paid by the Corporation, undertake the duty of visiting every house in which the birth of a child is reported, with the object of educating mothers in the best methods of bringing up young children. By these means, Mrs. Worthington stated that a good deal of influence has been brought to bear upon them to adopt regular hours and not be quite so miscellaneous in their feeding operations, and it is said that they have now acquired some settled notion of what is the best type of food to give children. Incidentally and very largely the labours of the Health Visitors in this connection bring to their knowledge all sorts of insanitary conditions, arising from overcrowding, stopped drains, and structural defects, which they proceed to report to the municipality on a form provided for the purpose. In the result, an inspector is at once sent and the evil is put right before very long. In a recent report of the Society's work, it is said that the Health Visitors have made 30,364 inspections of houses, and have reported 1,500 cases of insanitary conditions, and the Medical Officer of Manchester testifies that the effect is marked in the poorer districts of the city, and that "an improvement on former conditions can now be generally discerned." The Report goes on to quote from one of the superintendents that the poor "look upon the Health Visitor as their best friend, and there are few homes where she is not made welcome."

298. The Report proceeds :—

"In addition to teaching personal and household cleanliness and giving advice and sympathy, much practical help is given in ways such as giving food and clothing to specially needy families, finding work for men and women, getting recommendations for different hospitals and institutions, sending children into the country or to the seaside, making the beds of sick patients and cleaning their houses."

On the whole, however, the work is preventive rather than remedial.

"The women in the district are shown the evils of dirt and the dangers of living in unhealthy dwellings; they are taught to prevent the spread of disease, and the laws generally which will enable them and their families to lead moral and healthy lives."

Miss Squire, one of the Factory Inspectors employed by Miss Anderson for the purposes of the Memorandum which has been extensively

referred to, visited some houses with one of the Health Visitors and was

"favourably impressed with the effect she seemed to produce upon the mother or nurse, Appendix, V. 60. as the case might be. The serious proportion of infant deaths is a matter of common knowledge in the town, and the mothers and nurses seemed to take it as quite reasonable that the Medical Officer of Health should prescribe to them what they might and might not do, and to be impressed with the fact that what their mothers did before them would no longer be allowed to be their guide in the treatment of their children."

These visits are supplemented and the lessons they give enforced by the distribution of short leaflets (as concise and pointed as possible) in order to keep the advice given constantly before the mother's mind, and it is found that these leaflets, following upon personal visits, are read and treasured.

299. Fuller testimony is borne to the value of the system by the extent to which it has already been adopted in other places. Mr. Rowntree advocated municipal leaflets associated with visiting; he described the work of the Health Society in York and also the standard of knowledge and training to which visiting ladies ought in his opinion to attain. Mr. Fosbroke testified to the good results of the lady visitors employed by the Worcestershire County Council. Dr. Smith said that the distribution of leaflets by the East London Children's Hospital had had great effect, and he thought that direct work among parents was more valuable than the training of children and young people with a view to their becoming parents, a view also taken by Dr. Hutchison, because in his opinion these things do not come home to girls until they have a baby of their own.

Rowntree, 4994-5028
5158-5168
5252-5263

Fosbroke, 6613-6621

Smith, 8464-7.

Hutchison, 9937-
9953, 9980-9990.

300. The Committee believe that enough has been said of the value of the system, and the testimony paid to its success by competent judges, to justify them in urging upon every locality the adoption of similar methods. The system has the advantage of linking individual and philanthropic effort with municipal responsibility, in a way that regularises the one while energising the other, and appears to give to each its proper influence in dealing with social wrongs, at the same time tending to check the overlapping and misdirection so often characteristic of purely charitable impulse.

301. Other agencies to the same end, such as lectures and mothers' meetings are not excluded; indeed, they can very well be worked into the system and be utilised to expand and develop its scope. There is no step, in short, towards training mothers in personal, domestic and infant hygiene, with which it cannot be associated, and towards the effect of which it cannot be made to contribute.

302. The Committee desire to press these considerations with all the earnestness at their command upon the most serious attention of the community, and they would further suggest to the Local Government Board the desirability of issuing to local authorities a circular explaining the objects to be sought and the means by which they can best be attained. It is in connection with steps of this sort that the Committee believe an Advisory Council formed on the lines recommended in the earlier part of the Report might prove of great use to the Department usually charged with the interests of Public Health.

vii. School System—Medical Inspection of School Children—Feeding of School Children.

303. In a country without compulsory military service the period of school life offers the State its only opportunity for taking stock of the physique of the whole population and securing to its profit the conditions most favourable to healthy development. It has been shown in the first part of this report how the occasion may be utilised in furtherance of the objects of an anthropometric survey, and it remains to be considered what are the conditions of school life adverse to physical well-being, and how the opportunities which it presents can be made to realise the best results for the rising generation, at perhaps, the most sensitive period of its growth.

304. It may be said at once that the general effects of school life are not prejudicial to health. The civilising influence exercised by the school during

Eichholz, 526-530.
578-582.
Niven, 6246-9.

Cameron, 11053.
Gorst, 11852, 11872.

Kerr, 801, 812, 818.
Collie, 4019.
Garnett, 9237.

Greenwood, 8213,
8265-8280.
Kelly, 11366-8.

Eichholz, 579-583.
Kerr, 808-810, 946
-950.
Collie, 3982, 4024-6,
4096-4101.
Chalmers, 6164-9.
Horsfall, 5687-5693.
Gorst, 11811-3.

Brunton, 2426, 2443
-9, 2470-9, 2528
-2537.

Lyttelton 5415-5428.
Fosbroke 6598-6608.

Gorst. 11816.

the last thirty years was noticed by both Drs. Eichholz and Niven. The untame savagery characteristic of certain types has disappeared, and Dr. Eichholz further thought that there was nothing in the conditions of school life which it was not in the power of existing authorities to improve; but popular opinion required educating on such elementary though important points as the seating of children, the arrangement of light, and the supply of fresh air. Evidence was given of children being kept too long at desks which do not fit them, in an attitude of strained attention, either writing or with their eyes concentrated on a blackboard, which, if the class happens to be a large one, perforce occupies a position in which some have a difficulty in seeing it. Very young children are sometimes observed sleeping in postures calculated to develop curvature, and infant occupations are criticised as often much too fine for their eyesight. It was also alleged that the eyes of scholars often suffered from the effects of a strong cross light, and that defective ventilation counted for a great deal among the unfavourable circumstances with which children had to cope.

305. While with the last-named exception schools on the whole seem to be in a good state, Mrs. Greenwood drew a sad picture of the dirt and darkness in some of the Sheffield schools, and Dr. Kelly, Bishop of Ross, taxed the National Board with indifference to the warming of schools, from which children suffered acutely. It appears that whatever fuel is used in schools in Ireland has to be procured by voluntary contributions or brought there by the children themselves, and it is not an uncommon thing for children to take a sod or two of turf to school on a winter's morning. Dr. Kelly goes on:—

"I might set it down as one of the causes of the poor physical development in Ireland that the school children are unfairly, in fact I might say cruelly, treated in the schools themselves. I see now many of these little children going to school all the winter barefooted, and in some instances they go to a school where there is no fire. The country children have to travel a couple of miles to school; a great many of them have no cloak or shawl, or anything to cover them. Ireland is rather a rainy country, and they go wet into the school and sit down there shivering all day."

The Committee think that a system under which the infliction of such suffering on poor children is possible requires amendment.

306. On the point of ventilation, there was some difference of opinion between the advocates of open windows on the one hand and mechanical appliances on the other, but as in the case of the latter the inlets are usually under the control of the teacher, it is of the first importance that he should be alive to the value of fresh air, and in this respect among others there appears to be something wanting to the education of teachers in the principles of practical hygiene. Sir Lauder Brunton was perhaps the most emphatic critic of the school system, and believed that both in regard to breaks in school work and the substitution of physical exercises for prolonged mental application the Swiss practice was preferable, but his actual knowledge of what goes on in English schools did not appear to be very close, and the Committee are convinced that the regulations in force, if properly observed, are sufficient to cover both points of attack.

307. Infant schools as conducted in urban districts can no doubt be worked to the great physical advantage of the children attending them, but there is evidence that a handful of small children in a rural school necessarily suffer a good deal from neglect or are taught under conditions from which no advantage can be derived. So impressed were Mrs. Lyttelton and Mr. Fosbroke with the unsatisfactory results that may be expected from keeping tiny children at school that they would not permit attendance under five at all. Mr. Fosbroke made this one of his chief points and had evidently given it a great deal of attention. He thought the effect of a later attendance at school on the children themselves, both physically and mentally, would be most salutary, and it would have the indirect result of keeping mothers at home and compelling them to attend to domestic duties. Sir J. Gorst went even further, and would be glad to see country children excluded from school up to seven years of age.

"That is the practice in Switzerland, which is perhaps almost the best educated country in the world. They do not let their children come to school till they are seven. They run about in the villages and mountain sides, and they are often employed in looking after cattle, goats, and so on. They do not go into school at all till they are seven years old, and therefore when they do go to school they are sturdy and strong, and their observation is awakened."

While the Committee are unable to accept this statement as entirely correct, they think that school attendance in the *rural* districts should not be compulsory till six or possibly till seven, and should be discouraged, if not absolutely prohibited, under five.

See Appendix III to the Report of the Committee on Employment of School Children (1901, Cd. 849).

308. The organisation of games and the provision of accommodation for outdoor exercises were strongly pressed by some witnesses, but no scheme of games alone can ever be made general enough to supply the place of methodical physical training. A model course of physical exercises, more thorough, systematic, and complete than any previously in use, has just been produced by the labours of another inter-Departmental Committee, and in connection therewith this Committee desire to express their opinion that wherever practicable, the prescribed exercises should be performed in the open air, and the interval utilised to obtain a thorough ventilation of the school premises, and particularly the class-rooms, which as a rule suffer most in this respect. Inasmuch, however, as the effect of physical exercises depends in no small degree on their regularity, and the climate of this country is such that exercises in the open air are necessarily interrupted for days at a stretch, the provision of play-sheds or rooms for physical exercises, other than the ordinary class-room, should be insisted on in ordinary circumstances as an almost indispensable part of the school equipment.

309. Mr. Atkins avowed himself a great advocate of games as an educational as well as a health-giving factor, and he thought there might be a much more systematic effort towards their proper organisation, both for children of school age and young people. Mr. Rowntree called attention to the same want, more especially in towns, and cited Boston as an example of the American practice in this respect, where there is no open space without some one to organize the children's play. Mr. Horsfall and others emphasised the need for physical recreation and exercise, through the lack of opportunities for which Mr. Edwards Rees said the children of Salford were losing the instinct of play. To this end playgrounds should be utilised, not only during the mid-day recess but after school hours. The Committee heard a good deal from Sir Lauder Brunton of an organization now in process of formation, under the name of a National League for Physical Education and Improvement, and they cannot do better than commend to its attention the expediency of placing itself in communication with the educational authorities throughout the country, with a view to their intelligent co-operation in a scheme of so much importance and utility. The Committee have read with great interest the observations of the Royal Commission on Physical Training (Scotland) on this subject, and think that paragraphs 85 and 86 of that Report deserve the special study of the organizers of the League. In the Committee's judgment a full consideration of the subject requires that due prominence should be given to the part that ought to be played by skilled physical instructors, and the need of securing a constant supply of such. In this regard, the suggestion in paragraph 314, as to the training and recognition of teachers and instructors, may be useful.

310. The teaching of cookery and household management assumed particular importance as bearing directly on the subject of this enquiry. The principles that should govern the teaching of cookery have already been laid down in paragraph 232 of this Report. These principles are to all intents and purposes embodied in the directions of the English and Scotch Central Education Authorities for the conduct of Cookery Classes, but there is a considerable body of evidence to show that, for various reasons, in practice the teaching of cookery has not had all the beneficial results that might have been expected.

311. Dr. Eichholz summed up the fruits of his experience in these words :—

" Many reforms are necessary in the teaching of cooking before it will become sufficiently useful in the home. The children begin to learn it too early to retain much by the time they leave school. They do not follow the work up sufficiently at home or at school to become conversant with the process taught them. It is the exception to find a girl repeat a lesson on the cooking of meat at home. The knowledge which the child gains is too insecure to tempt the parent to run any risks with the modest domestic allowance of meat. So it comes about that the girls become great adepts at making cakes. I think the work would be all the better for being concentrated upon the last six or twelve months of school life."

Atkins, 3000, 3041-
3060, 3075-3086.

Rowntree, 5129-
5140.

Horsfall, 5673-5683.

Rees, 4318-4330.
Fosbroke, 6648, 6681.

Loch, 10131-5. *V.E.B.*

Brunton, 2430, 2454-
7, 2537-9.

Lewis, 8579-8581,
8624, 8631.

Bostock, 7516-7522.
Stanley, 13448.

This testimony is confirmed by other witnesses such as Mr. Lewis, teacher in the West Green School, Tottenham, who pointed out that teachers were apt to substitute a standard limit for the age condition very properly inserted in the Code, and that one cause of the disposition to devote too much attention to the making of cakes and other attractive dishes is the difficulty of getting rid by sale—as the teachers are expected to do—of the plainer and more useful dishes. On the other hand, Mrs. Bostock and Miss Maude Stanley bore testimony to the beneficial effect in the homes of the teaching at present given in cookery classes in school.

312. It seems to the Committee that certain prevalent defects in the teaching of cookery are, in part at all events, due to the absence of an efficient system of inspection, but on a consideration of the evidence they are disposed to doubt whether any system of teaching cookery, however well organised, is likely to be effective or practical, which is confined to the period of school life and is not continued and supplemented by instruction of the girls at a more mature age, when they are more appreciative of the need of such instruction and more likely to have opportunities for the practical application of what they have learned. It is for this among other reasons that the Committee have elsewhere (paragraph 230) recorded their opinion in favour of compulsory Continuation Classes.

313. As regards the instruction of girls of school age, however, the Committee are disposed to agree with those witnesses who urged that instruction in Cookery, Hygiene and Domestic Economy, should, as far as possible, be made compulsory on the older girls, that such instruction should be concentrated in the last year or so of school life, and that room for it should be made by the omission at this stage of certain other subjects from the school curriculum. In this connection, they would direct attention to the scheme of supplementary courses for girls under the Scotch Code, which virtually carries out these suggestions. Girls are admitted to these courses at or after 12 years of age, on giving proof of reasonable proficiency in the three R's, and thereafter devote most of their school time to *practical* instruction in cookery and laundry work, and all that appertains to the management of a home. As girls must remain at school till 14, unless specially exempted, there is thus opportunity for concentrating the attention of the girls upon domestic subjects for a period of a year or eighteen months immediately prior to their leaving school.

314. It is obvious that if instruction of this kind is to form part of the normal school course, questions of school and personal hygiene and of the proper conduct of a home must receive much greater prominence than appears to have been the case hitherto in the normal curriculum of Training College students, and that further, in the large centres of population, there will be opportunity for the employment of a special class of teachers, of more moderate attainments, perhaps, as regards the ordinary subjects of a general education, but who have a thoroughly expert knowledge of the class of subjects in question. It follows from this that, in the opinion of the Committee, there should be greater diversity of type in Training Colleges and greater elasticity in the conditions upon which recognition as a Certificated Teacher is granted. This status, subject, of course, to sufficient safeguards as regards general education, should be conferred not only upon the teachers of book subjects but also upon those who have received a comprehensive and thoroughly satisfactory training as teachers of housewifery, or, to take another example, teachers of physical exercises, and the training of such teachers should be equally an object of State support.

315. Moreover, the Committee think it worth considering whether the present law as to school attendance could not be so modified as to render the partial exemption from attendance at school, which in England and Wales is at present granted only on a certificate of proficiency or of previous due attendance, obtainable without further condition than that the obligation to attend school, which at present ceases altogether at the age of fourteen, shall in that case be extended to a later age. By this means the knowledge acquired during

Smyth, 1277-1288.
Wilson, 1958-1960.
Close, 2604-2619,
2662-2681.
Rees, 4366-4383.
Lyttelton, 5435-7,
5375-5382.
Niven, 6295-6,
6379-6386,
6526-8.

attendance at elementary schools, which is too often forgotten on leaving school, might, it is hoped, be retained and extended. Legislation would, of course, be required to effect this, but the principle has already been to some extent recognised by the agricultural provisions of Robson's Act, and the Education (Scotland) Act, 1901, and it seems capable of extension in other directions; it might, for example, be made a valuable means of fostering that sense of domesticity in girls, the decay of which several witnesses deplored. In this, as in many other respects, the co-ordination of education which is now being effected by means of the new Local Education Authorities should be of great service in rendering a scheme of the sort feasible.

316. The problem presents features of too great minuteness and intricacy to be adequately discussed within the limits of this Report, but enough has been said to indicate the lines of advance upon which the Committee think that something may be done in order to equip the daughters of the people for domestic life.

317. Evidence was also forthcoming as to the unsuitableness of a stereotyped school system for children who are not up to normal school standard and are yet not so defective as to warrant treatment as "mentally deficient." Dr. Eichholz advocated the establishment of special schools, to which he gave the name of "Schools of Industry," something on the lines of day industrial schools for "retarded" children; that is, all children other than those actually defective who, by reason of insufficient feeding or whatever cause, are backward and not able to profit by the ordinary school curriculum. The condition of many of these children is the result of parental neglect, so that there are two sets of associated circumstances, educational and domestic, which, in his opinion, make it desirable to extend the industrial school system under Section 16 of the Education Act, 1876, with the same liability on the part of the parent to contribute. In his own words—

"I should like to see schools, either urban or rural, schools of industry, not punitive industrial schools, which shall recognise the uselessness of much of our present curriculum for retarded children, which will, in the first instance, create self-respect through cleanliness and decency, and aim at re-establishing an enfeebled constitution through suitable regular feeding. As these are secured, physical education becomes possible, and the final aim comes into the foreground, which is to provide a curriculum based largely on manual occupations and manual instruction, and which shall endeavour to implant in the minds of the children a respect for the dignity of work—a fact which their homes have never impressed upon them, and which the elementary schools likewise fail too often to accomplish."

Dr. Eichholz would like to see the thing done through the magistrate rather than by a simple drafting of children to and from such schools by means of the School Attendance Officers and the ordinary authorities concerned.

318. The Committee may take this opportunity of expressing their opinion that, wherever possible, in cases touching the young where the assistance of a magistrate is invoked, he should be a person specially selected, sitting for the purpose.

319. Dr. Kerr was also in favour of a system of special schools for retarded children, though he had not considered the matter in relation to the food problem. He considered that as many—

"as ten per cent. of the ordinary school populations all over the country, at any rate in the first half of school life, require some consideration on account of debility and backwardness from various causes—some simpler education than the ordinary Board School attempts to give them."

In his view the method of selection for such schools would depend on the results of medical and educational inspection, the great point to be kept in view being "to suit the curriculum to the child instead of the child to the curriculum." It would, of course, be an essential feature of the scheme that children who under special treatment became fit for the normal type of school should be transferred there for the remainder of their school life. Besides these "retarded" children, Dr. Kerr thought there was a group of semi-invalids for whom something between a school and a hospital in the country should be started.

Eichholz, 486-494,
680-708.

Eichholz, 486.

Eichholz, 486-494,
680-708.

Kerr, 783-794, 846-9,
869-880, 888-902,
918-941.

Medical Inspection of School Children.

320. It is obvious that underlying all these schemes there is need of a much more complete system of Medical Inspection in schools than has yet been attempted, and it is not therefore surprising to find that all the medical witnesses and others laid great stress upon its introduction on some recognised basis.

Eichholz, 456-464,
550, 1, 615-9.

321. Dr. Eichholz thought it was the greatest need in school organisation. On the ground of expense he would confine a general examination to the poorest schools, and considered that in London the work could be done by ten young men at £250 each. The School Board had nothing like a big enough staff and confined their attention to cases of defective eyesight, feeble-minded children, and the medical examination of pupil and assistant teachers. Dr. Eichholz explained to the Committee the conditions observable in the children attending these poorer schools, and described the means by which medical inspection might be utilised to note and check degenerative tendencies. Children who were thought to need medical examination in better class schools would be examined on special notification by the teacher, but in the schools classified as poor the inspection would cover all new admissions and the re-examination of old cases where necessary. What follows on such a system is thus described :—

Eichholz, 463.

"The business of the school doctor is to examine children at admission when necessary, and periodically later; to make recommendations to the school authority which shall reach the parent without delay. It is for the school authority to determine how to make those recommendations effective. It is impossible that the doctor can enforce anything that he says. The way I suggest this should be done is as it is done in Frankfort and in German schools generally. They issue a slip of paper, which I suggest should be in duplicate, which says, 'Your child is suffering from so-and-so, kindly exclude him until he is fit to attend.' In England this would not suffice, as it would give the parent an excuse for not sending the child to school. We want the certificate in duplicate so that the school attendance officer may keep its contents before the parent. The authority would issue one to the officer and the other to the parent, and the parent in this way might be dealt with according to the measure of his culpability or his powerlessness, if he did not or could not act upon it. Many cases would still need charitable aid and whatever help managers could procure. I do not anticipate that the need for punitive expedients would often arise. A few wholesome examples would effect a very rapid cure of culpable neglect."

Among the further duties of the medical inspector would be :

Eichholz, 464.

"recommendations to the local authority on general and special points of school curriculum, length of lessons, apportionment of intervals for recreation, organisation of recreation, ventilation, lighting, artificial and natural, the use and abuse of needlework, desking for children of various ages, use of slates, towels, local variations in curriculum to meet special needs."

Kerr, 853-9.

Collie, 3989-4006,
4120-6.

Chalmers, 6183-6.

Niven, 6346-8.

Mackenzie, 6787-
6858-6869 c 6813.

322 Dr. Kerr thought that with the assistance of intelligent teachers trained in hygiene, there need not be a very great augmentation of the existing medical staff. Dr. Collie went into the matter in some detail and thought that in the first instance it would be sufficient to entrust to the teacher the duty of reporting to the medical inspector the case of any child who on admission appeared to him to be suffering from any physical or mental defect; and the medical inspector would attend occasionally to receive such reports from the teacher and examine any child who required it. He advocated the employment of doctors of experience rather than young ones, and said the late School Board staff was quite inadequate, but well qualified general practitioners might be entrusted with the inspection of eyes and teeth (and presumably ears) without having recourse to specialists. No very large staff would, in his opinion, be required. Dr. Chalmers quoted the Report of the Royal Commission on Physical Training (Scotland), and declared a medical inspection the necessary accompaniment to any system of general physical training in schools. He thought medical inspectors might be useful in matters of ventilation and health conditions generally. Dr. Niven, like Dr. Collie, would utilize the teachers in the first instance and would require them to have special training. This last indeed appears a necessary corollary to the introduction of any system of the sort. Dr. Mackenzie considered "the systematic medical inspection of schools as one of the things that is most called for at the present time," and explained with some fulness the methods he advocated. He thought the

superintendence of the system might be entrusted to the Medical Officer of Health, and the inspection made on admission and periodically afterwards. The assistance of specialists on certain points would probably be required, but he agreed with other witnesses that properly trained teachers could render most useful assistance. Mr. Loch would not neglect the medical inspection of the home, "the fulfilment of an already recognised public sanitary duty," and he would have the two go together. Mr. Murphy was also among those who emphasized the need of a general medical inspection of schools.

Loch, 10328-10333.

Murphy, 10403.

323. For the reasons, then, that appear in the discussion that has occupied the preceding paragraphs of this sub-section, the Committee consider that a systematized Medical Inspection of School Children should be imposed as a public duty on every school authority, and they agree with the recommendation of the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. The value of such an inspection is well illustrated by the particulars given in a recent report by Mr. George Andrew, of the Scotch Education Department, on the *Gemeindeschulen* of Berlin and Charlottenburg. From that report it appears that of 2,547 children examined on admission to the schools of Charlottenburg, 321 or 12·3 per cent. were rejected as being unfit for the work of ordinary schools, and of all the children examined, 63 per cent. were described as not completely normal (*nicht völlig normal*).

324. The Committee believe that, with teachers properly trained in the various branches of hygiene, the system could be so far based on their observation and record, that no large and expensive medical staff would be necessary. The general inspection may safely be limited to that class of school which from its character and surroundings affords clear evidence of the type of which its scholars are composed, and it should be repeated as often as the medical officer thinks necessary. In other cases it will be enough for him to examine such children as may be submitted to him by the teachers, and it would be for him to determine whether circumstances called for expert assistance. In no instance should the inspector do more than state the facts that require the attention of the parent, cases of poverty or neglect being left to the proper authorities to deal with.

325. The Committee further think that the services of the medical inspector should be at the disposal of the school authority in respect of all matters where the advice of a person skilled in the hygiene of child life may be wanted, and they look in the result to a much more intelligent handling of many of the problems with which that authority is charged.

326. Owing to the healthier conditions commonly prevailing in regard to the nurture and growth of the country population, the Committee do not think that these recommendations will have any appreciable effect in augmenting the charge for education that now devolves upon the rural ratepayers: on the contrary they are of opinion that bringing the sanitary administration of the county into touch with the schools may lead to the anticipation and prevention of many of those epidemics which are now such a fertile source of local expense.

Feeding of School Children.

327. The Committee have reserved to the end of this subsection the discussion of the question of feeding elementary school children (1) because it lies outside any direct obligation that has hitherto been recognised and (2) because some of the matter that precedes has a bearing upon its consideration.

328. Besides seeking to elicit the opinion of a large number of general witnesses on the point, the Committee sought to equip themselves for the task of formulating some conclusion by the examination of certain persons who were either called or tendered themselves to give special evidence thereon. These included Mr. W. H. Libby, Secretary to the East Lambeth Teachers' Schools Dinner Association, Sir John Gorst and Dr. Macnamara, Members

of Parliament, and Dr. Osmond Airy, one of H.M. Inspectors of Schools, who for many years was chairman of the organisation for providing dinners to poor children in Birmingham.

329. Before, however, proceeding to examine the evidence on the point, it may be as well to state that the general trend of opinion was to the effect that the ultimate means of dealing with the difficulty lay in the development of those forces of social education which have been described above, and in the operation of the great body of ameliorative tendencies which would raise the general condition of the poor, and foster a sense of parental responsibility, spreading knowledge and enlightenment in their train.

330. It was nevertheless acknowledged that the evils arising from underfeeding were so widespread, and in certain localities so pressing, that some authoritative intervention is called for at the earliest possible moment to secure that the education of the children who are obliged to attend school shall not be hampered and retarded by the physical conditions thereby engendered.

331. The evidence on the specific question of the feeding of children compelled by law to attend a Public Elementary School can conveniently be treated under the following heads :—

- (a). The extent to which underfeeding prevails at present.
- (b). Existing voluntary methods of providing food.
- (c). Proposals in regard to the more systematic feeding of school children.

(a). The Extent of Underfeeding.

Eichholz 435-7.

332. On this point Dr. Eichholz, one of H.M. Inspectors of Schools, gave very interesting evidence. In pursuance of his view, already noted, that the whole question of bad physique practically centres round feeding, he made a special investigation into the conditions of the Johanna Street Board School, Lambeth, as a type of school in a very bad district, and he considers that 90 per cent. of the children are unable, by reason of their physical condition, to attend to their work in a proper way, while 33 per cent. during six months of the year, from October to March, require feeding. He gave the Committee an estimate, based on the figures of the voluntary feeding agencies, of the number of underfed children in London. Some time ago he furnished the Board of Education with a similar estimate, in which he set down the number as 60,000; but he has since gone into the question in more detail and now estimates the number as approximately 122,000, or 16 per cent. of the elementary school population of London.

Eichholz 471, 476.

Eichholz 472, 475.

333. The London School Board expressed the opinion that there were not more than 10,000 children suffering from malnutrition; but, in Dr. Eichholz's view, this estimate is belied by the actual figures given in the report of the Joint Committee on Underfed Children, which gives the average number of children fed per week during the weeks the feeding centres were open in 1902-3 as 22,206. His argument is that in the first place this figure only refers to children attending Board Schools; and secondly it is very fallacious as an index of the total number of children who are underfed, because the same children are not being fed all through the season; the result of investigation shows that on an average the centres feed three times as many children during the season as they feed on any one day, and that the number furnished as the weekly average of children fed may be taken as an index of the daily average of meals provided; and therefore we get 66,000 as the rough total of underfed children attending the London Board Schools. Besides this there are the children attending voluntary schools. And, as the amount spent per annum in London by voluntary feeding agencies is £6,100, and £100 spent is said to represent 2,000 necessitous children fed per season, the total estimate of underfed children in London is, roughly speaking, 122,000, or 16 per cent of the whole.

334. This calculation obviously proceeds on the assumption that all the children fed at schools and centres would otherwise be underfed, but such observations as those of Miss M. Horn, manager under the late London School Board, in a paper recently read to the International Home Relief Congress, throw considerable doubt on the validity of the assumption.

335. Dr. Eichholz also made enquiries about Manchester, and was assured that 15 per cent. of the Manchester children are underfed. As to this, Dr. James Niven, the Medical Officer of Health for Manchester, did not give any figures, but expressed the opinion that there was a very large number of underfed children, that the child must be fed at any cost, and that no voluntary agencies could possibly cope successfully with the evil. On the other hand, Mr. Edwards-Rees, Vicar of Pendleton, Salford, and a member of the Salford Education Committee, stated distinctly that not more than 2 per cent. of the children in Salford and Manchester come to school underfed; and in his opinion the question of malnutrition is not nearly so urgent as that of lack of proper physical training and pure air. Dr. Henry Ashby, of Manchester, nominated by the Royal College of Physicians to give evidence on the subject of nutrition, was inclined to think that most children go to school having had sufficient breakfast; so that there is some apparent conflict of evidence as to the conditions in Manchester.

336. To revert to London, Dr. James Kerr, Medical Officer to the London School Board, "does not feel as strongly on the point of nutrition, or rather want of nutrition, as most people"; but he admitted not having considered the matter as fully as Dr. Eichholz. Dr. R. J. Collie also, a Medical Inspector to the late London School Board, stated that there is "not a very large proportion of children who are actually half-starved; it is only in some districts"; but he did not give any statistics.

337. Of other witnesses who spoke on the extent of underfeeding, Mrs. Close, a lady who considers herself familiar with rural England, said that children are constantly half-starved when they get to school owing to the laziness and neglect of the parents. Dr. Chalmers, Medical Officer of Health for Glasgow, is now making enquiry into the proportion of underfed children in Glasgow, but had no figures at the date of giving evidence.

338. Dr. W. L. Mackenzie, Medical Officer to the Local Government Board for Scotland, said that in the slums of Edinburgh a large proportion of children were half-starved, and he agreed that to subject a half-starved child to the routine of school would be the height of cruelty, and the educational result would be poor. Mrs. Mackenzie, the wife of Dr. Mackenzie, gave the same sort of opinion: "the child must be fed." Mr. W. H. Libby said that a feeding agency in Lambeth coped with from 12 to 15 per cent. of the elementary school population, and in the poorest districts with from 25 to 30 per cent., which, so far as that locality is concerned, bears out Dr. Eichholz's figures. Miss Garnett, the head of the Diocesan Women's Settlement in the extremely bad district of the Potteries, attributed the faulty nourishment of the children to the neglect of the mother who goes to work in the factories; the teachers in the various schools notice that children from such homes are less able to do their morning's work; but they do not admit that the proportion of such cases is very large. Mr. C. S. Loch, Secretary to the Charity Organisation Society, did not think a large number of children were sent to school half-starved, but gave no figures. Mr. Shirley Murphy, Medical Officer of Health of the Administrative County of London, regarded the question as by far the most important before the Committee, and said "the child has got to be fed." Finally, Dr. Kelly, Roman Catholic Bishop of Ross, said that in the South of Ireland it was commonly the case that children came to school underfed.

(b). Existing Voluntary Methods of Providing Food.

339. There has not been a great amount of definite evidence on the voluntary agencies in existence. As regards London, Dr. Eichholz mentioned the following agencies which spend about £6,100 per annum collectively:—

London Schools Dinner Association.

Mr. G. R. Sims Referee Fund.

Destitute Children's Dinner Society.

East Lambeth Teachers' Schools Dinner Association.

Southwark Children's Free Meals Fund.

The work of these agencies has been coordinated, so far as the Board Schools

are concerned, by the Joint Committee on Underfed Children, which was worked under the ægis of the School Board and existed to prevent overlapping.

Eichholz, 482.

Libby, *passim*.

Atkins, 2967-2974.
2981.

Chalmers, 6173-7.

Maurice, 279-283.

Mackenzie, 6977.
Mrs. Mackenzie,
7005-7013.

Airy, *passim*.

Airy, 13253.

340. In regard to the sum contributed by the parents, Dr. Eichholz said that it amounted to 5 per cent. in the case of the London Schools Dinner Association, and 25 per cent. in the case of the Destitute Children's Dinner Society.

341. Mr. Libby, who is Secretary to the East Lambeth Teachers' Schools Dinner Association, gave a description of the working of the Free Meal Fund in connection with the Association. The fund has been running about twelve years, and is conducted on business lines; it is worked by the teachers through the attendance officers, and careful enquiries are made as to the circumstances of each family before a child is given a meal. There are breakfast centres and dinner centres. A child can be given a pint of vegetable soup and a piece of brown bread and a piece of cake at the cost of 1d. About 2 per cent. of the children pay the full 1d., some pay part of the cost, and the rest nothing; not more than 7 or 8 per cent. pay anything at all, but Mr. Libby thought this small percentage was due to the thing not being sufficiently worked. In spite of the fund there are still many underfed children, because there is not sufficient organisation; it is difficult to get sufficient organisation by voluntary methods.

342. Mr. J. B. Atkins, the London Editor of the *Manchester Guardian*, gave a description of the Free Feeding System in Manchester. There the funds are derived entirely from voluntary sources, but the School Board recognised the charity and the teachers helped in distributing the food, &c. The movement has grown steadily, and in 1902, 139,000 free dinners were given, at the cost of a little over £400. In this case also the circumstances of the family are carefully investigated by the attendance officers, but no attempt is made to recover payment from the parents.

343. In Glasgow Dr. Chalmers said there is an institution called the "Poor Children's Dinner Table," by means of which the condition of every child is enquired into, and meals are given to the underfed; the system is very comprehensive apparently, so that "no child in Glasgow ought ever to go to school starving," but no detailed account was given to the Committee. Sir Frederick Maurice, however, referred to the Glasgow system and stated that the difficulty as to parental responsibility had there been solved by means of a very thorough system of investigation, and that the applications for gratuitous food have diminished rather than increased.

344. Free meals are given in Edinburgh to about 2,000 children, but the evidence given by Dr. and Mrs. Mackenzie makes it doubtful whether this number by any means exhausts the number of children who are underfed.

345. The most complete scheme described was started by the late Mr. George Dixon, and has now been in operation for 20 years in Birmingham with Dr. Airy, H.M.I., as chairman of the organisation. In considering the principles on which they would act it was decided in the first place that only those should be helped who could expect practically nothing if it was not given to them, and secondly that only such a meal should be given as would not compete in any way with the meal which could be provided even in a very poor home. It was next decided that cases for help should be selected with the greatest care. This is done by three different people—by the head teacher of the school, by the class teacher in whose class the boy or girl is, and by the visiting officer. The co-operation of these three, Dr. Airy states, has been so successful that he does not believe there has been 5 per cent. or anything like it of abuse. The number of children fed in normal times is 2,500 and the plan pursued is thus described:—

"We began with ten centres. We had large coppers for soup at ten centres, to which the children came from all outlying schools. The School Board allowed us in each of those centres to canvas off some twenty or thirty yards of playground, perhaps five yards wide, and the cooking was done at one end. There the soup, a good lentil soup with some animal stock, and the bread and jam, were prepared. The process was simply this: we had to do everything to simplify matters. It had to be a rough business, but it was an effective one. The children come, and form file, and then they walk up, and as they walk up they take a spoon out of a basket and go up to where the voluntary helpers are distributing the soup. They take their bowl of soup and go on to benches on the other side of the canvassed shed and sit down and eat their soup. The moment they have done they put their basin and spoon into another basket, and as they go out they take a large slab of bread and jam, and eat that

in the street. The School Board allowed us to do this without any rent, and they gave us the gas. Then the cooking of those meals is done by paid labour, but the distribution is done by the voluntary help of ladies at each centre. There is a rota at each centre and there are two ladies who attend each day. Our manager I will refer to directly—he is a most capable, suggestive man. We were very much distressed at the fact that the children would come a mile or a mile-and-a-half to eat this poor dinner, and they would come through slush and snow and wet, and we wanted to prevent that. A system of baskets was invented. There is a system of baskets at present in use by which the soup can be kept absolutely hot for more than an hour. I have tried it at both ends, and I find it is almost as hot as when it comes out of the copper. We reduced the number of centres to four or five, and now all the outlying schools send their baskets with a paper saying how many dinners they want. Those dinners are put into the baskets at a quarter to twelve or twelve o'clock, and then the staff of the school help in distributing the meals at that school."

346. The Committee have thought it worth while to print this part of Dr. Airy's evidence in the body of the report because of the remarkable economic fact with which he concludes :—

"We give that dinner, a large bowl of soup—in fact, they have two or three bowls if they like—and a large slab of bread and jam, for less than a half-penny, and in that expense is included £150 or £100 a year to the manager."

Airy, 13258.

347. He attributed this result (1) to the concentration of the population that has to be helped, (2) to the good will and assistance of the local authority, and (3) to the organizing skill of "a heaven-born manager," a retired naval officer, and to the co-operation of volunteers. In addition to those dinners, which provide for some $2\frac{1}{2}$ per cent. of the children of school age, breakfasts, consisting of cocoa, milk and bread, are supplied by the bounty of a private individual to the necessitous children in about twenty schools in Birmingham, as Dr. Airy believed, under similar conditions. The testimony of the teachers is unanimous, that the system pursued enables the children to do the ordinary school work, and they report that the difference is perfectly extraordinary.

Airy, 13272.

(c) *Proposals in regard to the more systematic feeding of school children.*

348. With scarcely an exception, there was a general consensus of opinion that the time has come when the State should realize the necessity of ensuring adequate nourishment to children in attendance at school; it was said to be the height of cruelty to subject half-starved children to the processes of education, besides being a short-sighted policy, in that the progress of such children is inadequate and disappointing; and it was, further, the subject of general agreement that, as a rule, no purely voluntary association could successfully cope with the full extent of the evil. Even those witnesses who were inclined to think that its magnitude had been much exaggerated, did not question the advisability of feeding, by some means or other, those children who are underfed, provided it could be done quietly and without impairing parental responsibility. The only witness who appeared absolutely to dissent from that view was the Bishop of Ross, who, while admitting an enormous number of underfed children in Ireland, deprecated any steps being taken to remedy the evil, on the ground that it would weaken the sense of self-respect and self-reliance both of parent and child.

Kelly, 1130-88.

349. The purely medical view was well put forward by Dr. Robert Hutchison, a well-known authority on nutrition, nominated to give evidence by the Royal College of Physicians. He said, "looking at it purely scientifically, it would be an extremely important thing to ensure to every child at school a sufficient and proper sort of meal"; and again, "I feel certain that the provision of meals would do a great deal to improve the health and growth and development of the children of the poorer classes." It is worth noting, also, that he considers the ages of ten to fifteen as the most critical period, rather in opposition to the view expressed by some witnesses that the period of infant life is the most important. This witness further gave the Committee to understand, that a child ought to have a certain amount of nourishment during the twenty-four hours, but that it does not very much matter how you divide it up; except that it is more important to have a meal before physical exercise than before mental; and, therefore, mid-day dinner is more important than breakfast. This view is interesting, as differing from a very general opinion that no child should be allowed to come to school without sufficient breakfast. Dr. Hutchison further

Hutchison, 9973 8,
10064-10015,
10067, 8.

thought that most children require a certain amount of animal food, and pure vegetarianism is not sufficient. He spoke entirely from the medical point of view, and refused to discuss the economic question.

Booth, 992-6,
1128-1133.

350. The general trend of opinion is in favour of some sort of regularised feeding in school, or at centres, exacting payment from the parents where they are in a position to pay, but giving the meal free where they are not. Thus, Mr. Charles Booth is in favour of some sort of school restaurant in every school, or connected with every school, where food could be obtained at a minimum cost, but with no intention of giving it away; though he admitted that "in some cases it might be a mere charitable assistance." He is also in favour of some special industrial schools, where children, whose parents culpably neglect them, could be fed and boarded, the cost to be charged upon the parents.

Brunton, 2428,
2450-2.

351. Sir Lauder Brunton thought it might be necessary to provide food at schools, and "in cases where the parents are absolutely unable to pay, food might be provided out of the poor rates;" but "every effort must be made to force the parents to pay properly for the food."

352. Mr. Atkins said,

Atkins, 3000,
3006-3018.

"We have got to the point where we must face the question whether the logical culmination of free education is not free meals in some form or other, it being cruelty to force a child to go and learn what it has not strength to learn."

But he agreed that the parents should be made to pay, if possible.

Collie, 3955-9.

Rowntree, 5039-
5041.

Mrs. Mackenzie,
7030-4.
Garnett, 9215-9.

353. Dr. Collie thought that underfed children should be fed by means of school kitchens, and that the parents should be prosecuted for neglect; a few prosecutions would have a salutary effect. Mr. Seebohm Rowntree advocated the judicious feeding of school children, so as not to pauperise the parents. Mrs. Mackenzie thought the child must be fed, but there ought to be power to "arrest the wages of the parents." Miss Garnett thought the children must be fed, and there were other opinions to the same effect.

Loch, 10192-9,
10242-6,
10271-6.

Murphy, 10402-
10411.

Niven, 6349-6378,
6508-6510.

354. The opinion of Mr. C. S. Loch is worthy of consideration, as being presumably the official view of the Charity Organisation Society. He found fault with the existing systems of voluntary feeding, as "purely a movement against destitution without regard to education;" he stated his belief that no child should ever be fed without thorough investigation into the circumstances of its family, and no free meal given except in special cases, and then only as secretly as possible; but he admitted the necessity in special cases. The feeding should not be at the school, though it does not appear from his evidence where it ought to be. He instanced the difficulty in former days, before the Free Education Act of 1891, of getting educational fees out of parents, and argued there would be similar difficulty in getting feeding fees. Both Mr. Loch and Mr. Shirley Murphy thought that in cases of real destitution the Poor Law Administration should always be brought into play, and not kept out by any system of free feeding.

Gorst, 11834.

355. Dr. Niven propounded a definite scheme for ascertaining the fact of malnutrition, for feeding the child, and enforcing parental responsibility. The teacher would be taught to note all children obviously suffering or undersized, and to report them, if diseased, to a medical officer; if underfed, to the educational authority. The director would then instruct the attendance officer to ascertain the circumstances of the family; and the subsequent feeding of the child would depend upon the facts thereby elicited. It is worth noting that any such system would in the first instance be rendered easier by an organised medical inspection of schools, a proposal, as it has been seen, very widely and generally advocated.

356. The most uncompromising advocacy of public responsibility came from Sir John Gorst and Dr. Macnamara, and as the first-named appealed to the authority of the other, it is fair to treat his proposals as put forward

in the name of the two. Dr. Macnamara has based his recommendations on Macnamara, 12376. the following proposals of a Committee of the London School Board in 1898, which, however, do not appear to have commended themselves to the School Board of the day :—

Children attending School unfit for School Work.

(i.) It should be deemed to be part of the duty of any authority by law responsible for the compulsory attendance of children at school to ascertain what children, if any, come to school in a state unfit to get normal profit by the school work—whether by reason of underfeeding, physical disability, or otherwise—and that there should be the necessary inspection for that purpose.

Provision for Children sent to School “Underfed.”

(ii.) That where it is ascertained that children are sent to school “underfed” (in the sense defined above), it should be part of the duty of the authority to see that they are provided, under proper conditions, with the necessary food, subject to the provision contained in Clause (vi).

Supervision of Voluntary Organisations by Authority.

(iii.) That existing or future voluntary efforts to that end should be supervised by the authority.

Voluntary Effort to be Supplemented if inadequate.

(iv.) That in so far as such voluntary efforts fail to cover the ground, the authority should have the power and the duty to supplement them.

School Dinners available for all Children, and Method of Payment.

(v.) That where dinners are provided it is desirable that they should be open to all children, and should be paid for by tickets previously obtained, which parents should pay for, unless they are reported by the Board's officers to be unable by misfortune to find the money; but in no case should any visible distinction be made between paying and non-paying children.

Prosecution of Parent for culpable Neglect.

(vi.) That where the Board's officers report that the underfed condition of any child is due to the culpable neglect of a parent (whether by reason of drunkenness or other gross misconduct) the Board should have the power and the duty to prosecute the parent for cruelty, and that, in case the offence is persisted in, there should be power to deal with the child under the Industrial Schools Act.

357. Dr. Macnamara was good enough to explain to the Committee how a scheme on these lines could be brought into practical application, and gave interesting evidence as to the success claimed for similar schemes in Brussels, Vienna and Paris. Upon the plan followed in the last-named city he estimated the outside cost of its application to London to amount to £120,000. He did not believe that any serious difficulty would arise in determining what children should be fed without paying, as “the attendance officer and the teacher together could bring you very near to the actual state of facts,” and he was prepared to press the case against the parents who neglected their children with all the force at the disposal of the law. He advocated dealing with them by an extension of the Prevention of Cruelty to Children Act, or under the Education Acts by enabling the school authority to recover the cost of food in the same way as fines for non-attendance are recovered. The permission to parents to have their children fed at school, if they desired it, would, it was believed, greatly facilitate the operation of such a scheme, and Dr. Macnamara agreed that where parents made use of it as a convenience it would be fair to make them pay something in excess of cost price, which would to some extent diminish the charge that would in the last resort fall upon the community. The weak point in the system was admitted to be the difficulty of maintaining voluntary effort and providing public help at the same moment. Sir John Gorst, it is true, said the British public is very fond of doing some part of the work of the Government for them, instancing the lifeboat service, and thought private benevolence would still come in, though the school authority should be responsible for its efficient working; but Dr. Macnamara was obliged to acknowledge that in those towns abroad where the municipality had stepped in, the flow of charity had been arrested, and he was not prepared to think his scheme could be adopted without a substantial public charge. This he would allow, subject to increased powers of dealing with a parent who could and would not pay, which he regarded as an essential part of the scheme.

Macnamara, 12429.
12438.

Macnamara, 12425.

Macnamara 12488.

Macnamara, 12468

Gorst, 11915.

Macnamara, 12384.

358. On a general survey of the evidence, and bearing in mind the considerations which form the subject of Paragraphs 329 and 330, the Committee think that a large number of children habitually attend school ill-fed, but this

number varies locally with the time of year and with the conditions of employment, and is not likely to increase—indeed they look, as they have said, with confidence to the operation of many causes towards its diminution.

. 359. It seems, further, that in a large number of cases voluntary organisations with the support and oversight of the Local Authority are sufficient for the purpose, and as long as this is so the Committee would strongly deprecate recourse being had to direct municipal assistance.

360. Circumstances, however, do arise which call for more immediate aid, and in which the School Authority, taking into account the difficulty in the way of home provision of suitable food, and the number of children who attend school habitually underfed, are willing to provide regular and sufficient meals, and in such cases the Committee agree with the opinion of the Royal Commission on Physical Training (Scotland), that “the preparation and cooking of these meals, where it is found necessary to provide them, “ought to be regarded as one of the charges incident to school management.”

361. By a differentiation of function on these terms — the School Authority to supply and organise the machinery; the benevolent to furnish the material—a working adjustment between the privileges of charity and the obligations of the community might be reached.

362. In some districts it still may be the case that such an arrangement would prove inadequate, the extent or the concentration of poverty might be too great for the resources of local charity, and in these, subject to the consent of the Board of Education, it might be expedient to permit the application of municipal aid on a larger scale. As a corollary to the exercise of such powers—which should be by scheme sanctioned by the Board—the law would have to be altered so as to furnish means, as was suggested in evidence, to compel the neglectful parent to take his full share of responsibility, and the Committee are sanguine that a few prosecutions to this end would have a most salutary and stimulating effect.

363. It seems probable that the best way of dealing with many of these children, whose antecedents place them definitely in the category of “retarded,” is by means of special schools of the Day Industrial Schools type, in which feeding would form an essential feature, and the choice between establishing such schools or merely treating children as underfed must be largely left to the Local Authority, after considering all the circumstances, to determine.

364. The Committee, moreover, do not think that children should be made the subject of either experiment without the concurrence of the Poor Law Authorities, and the funds should be found through the machinery of the Poor Law, with all due precaution against affixing any unnecessary stigma upon the deserving parent.

365. The Committee deem that by these means the community may be protected from the consequences of the somewhat dangerous doctrine that free meals are the necessary concomitant of free education. Education is a great social need, which individual citizens are, as a rule, not able to provide for their children on a sufficient scale, but food, like clothing and lodging, is a personal necessity, which in a well-ordered society it is not inherently impossible for parents to provide; and the effort to supplement their deficiencies, and to correct the effects of their neglect, should aim, in the first instance, at the restoration of self respect and the enforcement of parental duty.

viii. Risks of Contamination during Adolescence.

366. The Committee are impressed with the conviction that the period of adolescence is responsible for much waste of human material and for the entrance upon maturity of permanently damaged and ineffective persons of both sexes. The plasticity of the physical organization, the power it possesses of yielding rapidly towards degenerative or recuperative influences, appears

to terminate at eighteen, and the records of the years preceding that age are in the great majority of cases decisive for self-improvement or the reverse. Unfortunately, it is a period of which too little account is taken. With the classes under consideration education in the ordinary sense of the word is over just when in its full significance it becomes most necessary. Parental direction is almost entirely absent, and in lieu of it very little supervision is exercised in any other quarter over physical or moral development.

367. The Committee are not prepared with any comprehensive scheme of social regeneration, but there are agencies at work whose efforts deserve recognition and support, and there are ways in which the State might still exert some restraining and guiding influence in the interests of the adolescent of either sex.

(a) *Girls.*

368. Taking girls first, it is said, "the conditions under which they work, Eichholz, 435. rest and feed doubtless account for the rapid falling off in physique which so frequently accompanies the transition from school to work." The secretaries of Girls' Clubs were quoted "that as soon as a girl leaves school she does not fall off immediately, but between fifteen and eighteen she begins to suffer, and if her work is too hard she does not recover." Hot rooms, unhealthy surroundings at work, bad food, late hours, excitement and stress of work, superadded to functional anaemia, are described as most detrimental during these years. The extension of the mid-day restaurant to meet the needs of adolescent girls was recommended, but the difficulty, in the opinion of one witness, was to get girls to feed themselves properly, however much restaurants might abound. Hawkes, 13113.

369. Testimony, however, was forthcoming that girls, as a whole, during these years showed improvement. Prof. Cunningham noted a conspicuous diminution in the number of young women whose figures were distorted by tight lacing. Whether due to "improved aesthetic taste" or the greater prevalence of outdoor exercises, the important effect of the change is recognised by all familiar with the anatomy of the thoracic and abdominal cavities. Moreover, it was remarked as a common impression that girls were actually bigger than they used to be, a statement which, in the absence of anthropometric observations, it is of course impossible to prove. Cunningham, 2220-5. Eichholz, 551.

370. The opinion of the Hon. Maude Stanley is valuable on this point. From an experience of thirty-four years in connection with Girls' Clubs in Soho, a district which Mr. Charles Booth marks as one of the blackest on the map, this lady was able to assure the Committee that the physical conditions of girls had improved. Though 50 per cent. of those that come under her review are working as tailoresses under circumstances which cannot be particularly favourable, she is satisfied that they are better grown and likely to do better towards their children than were their mothers. Even in a poor district in Walworth, where a club was recently started for the benefit of a most demoralised class, the girls who joined it were not physically deteriorated. Miss Stanley attaches great value to the contact with helpful and sympathetic women of a superior class which these clubs establish, and to the ten days or a fortnight in the country which most of the members enjoy through the medium of their organization. Miss Stanley was able to add, owing to maintenance of relations with members after they married, that they proved competent housewives and were greatly in request upon that ground. Stanley, 13381-8. Stanley, 13408. Stanley, 13465.

371. Unfortunately, the number of these clubs is small and the sphere of their operations far too limited to produce any general effect. Mr. Douglas Eyre, who spoke with authority on this point, confirmed the evidence of Miss Stanley that much less was done for girls than boys in this respect. Mr. Eyre enumerated the principal organisations that have for their object the strengthening and development of the work of institutions for the welfare of girls, but, so far as it was possible to collect reliable returns on the subject, he did not believe there were more than 5 per cent. of the youthful portion of the industrial population who were materially touched or assisted by Eyre, 3555-3563.

anything in the shape of a well organised recreation agency out of school or working hours.

372. The Committee have already (paragraph 230) touched upon the subject of obligatory evening continuation classes for girls beyond school age, which should have for their aim the instruction of girls in the objects of personal and domestic hygiene, and a large body of opinion was in favour of the experiment being made; and if physical exercises of a recreative character were included in the curriculum, the Committee believe it would add to the value and ultimately, it may be, to the popularity of such classes.

373. Wherever it was thought desirable, owing to the employment of married women in factories, or for other reasons, to establish municipal crêches, girls over 14 might be made to attend occasionally, and the teaching of infant management should rank with other forms of technical instruction in the way advocated by Miss Eves.

Eves, 7708-7719.

Eyre, *passim*.

Bagot, *passim*.

Eyre, 3574-8.

Bagot, 4693-9.

Bagot, 4564-7.

Rees, 4318-4341.
4427-4442; 4506-8.
Horsfall, 5667-9.

Rees, 4413-8,
4498-4501.
Bagot, 4618.
Atkin, 2918-2922.

Eyre, 3642-3652,
3692-5, 3710-9.

Eyre, 3532-5,
3548-3564,
3578-3584.

(b) Boys.

374. Turning to boys of the age under discussion, it is not too much to say that in their case physical training contains the most fruitful germ of moral and material well-being. The evidence of Mr. Douglas Eyre, who has been for years connected with the organisation of boys' clubs and other associations which rest on a basis of physical exercise, affords striking testimony to their value, but indicates at the same time how small a field is covered by existing effort owing to lack of funds, scarcity of personal service, and want of systematised co-ordination.

375. The work of a cognate character described by Mrs. Josceline Bagot, who for many years has maintained a Boys' Club in Lisson Grove, shows what may be effected by the single-handed exertions of an intelligent and sympathetic individuality towards giving lads of a very poor class that motive for self-preservation from contaminating influences which is the very bed-rock of self-respect, and it is not a little singular that so obvious an outlet for philanthropic energy should have received such scanty support, either personal or pecuniary. One reason appears to be the reluctance of some of the clergy to associate themselves with anything that is not primarily religious; as Mr. Booth puts it, "Obligatory attendance at a Bible class being administered medicinally, with cricket and football to take the taste away." Boys entering the club physically feeble are greatly improved by a few months' systematic training, and Mrs. Bagot's experience shows that the interest a lad acquires in physical fitness instinctively weans him from idleness and temptation to drink, while teaching the roughest to box gives them a chivalrous sense of obligation to the weak. Material improvement thus becomes the natural ground-work upon which moral and religious impressions are afterwards built up; but all these results are too apt to be lost by prematurely forcing religious interests upon the attention.

376. The evidence on this subject was not confined to London; the Rev. W. Edwards Rees and Mr. Horsfall testified most forcibly to the need of similar efforts in Lancashire. Mr. Rees considered the lack of physical training to be one of the two main causes of degeneration, and would make such training universal for boys and girls of all ages; both gentlemen deemed the provision of facilities for physical exercise and enjoyment as the most pressing question of the hour, and Mr. Rees in common with Mrs. Bagot and others was emphatic in attaching great importance to swimming. Mr. Douglas Eyre commented on the lack of encouragement given to physical education in continuation schools, and the difficulty, in the absence of some State system of training, of finding competent instructors. He also described the organisation and objects of the Twentieth Century League, which he hoped in due course would provide the machinery for intelligent co-operation among the various voluntary agencies in the field, and thus give the State a firmer foothold for direct intervention and support.

377. It is not a little curious, however, that a league with these objects should not have come to the knowledge of the persons engaged in the formation

of the National League for Physical Education and Improvement, which is apparently being promoted by Sir Lauder Brunton and others, with similar aims. That two leagues should be in the field for the same ends appears to the Committee a signal instance of that waste of energy and overlapping which the existence of each league is presumably designed to counteract.

Brunton, 2430,
2454-7, 2537-9.

378. Mr. Murphy was impressed with the number of boys employed on errands and as messengers (by which means they begin to earn money younger) who have no technical training and therefore subsequently drift into the ranks of unskilled labour. He threw out suggestions as to making them join cadet corps, with a view to their being fitted for military service, and at the same time teaching them a trade upon which they could engage after leaving the Army, if they enter it. In this connection it is interesting to note that, in Mr. Edwards Rees' opinion, the Lancashire working men at all events would not be afraid of some form of general military service which did not imply absence from home.

Murphy, 10440, I.

Rees, 4336-4341,
4503-8.

379. With a view to giving the people every possible opportunity for physical recreation, the Committee think it should be the duty of municipalities to provide and maintain open spaces in some proportion to the density of the population, and that such spaces, or some of them, should include shelters fitted with gymnastic apparatus, these last being put in the charge of competent instructors; and having regard to the paramount importance of the national physique to the community at large, they are also of opinion that some grant should be made from the National Exchequer in aid of all clubs and cadet corps in which physical or quasi-military training, on an approved scheme, is conducted, subject to public inspection, which grant might be provided without any additional charge to the Treasury, by insisting that a certain proportion of the sums already paid to the local authority under the Local Taxation (Custom and Excise) Act, 1890, should be devoted to physical education.

380. The Committee also think that the obligation should be laid on boys to attend continuation classes, in which drill and physical exercises should take a prominent place; and with a view to the encouragement of clubs and cadet corps, exemption from the obligation might be granted to all enrolled and efficient members of such organisations as submitted to inspection and conformed to the regulations qualifying them for public aid. By these means, without recourse being had to any suggestion of compulsory military service, the male adolescent population might undergo a species of training that would befit them to bear arms with very little supplementary discipline. The older lads could actually be familiarised with the use of the rifle, an exercise of no inconsiderable value from the point of view of general education, and a great deal might thus be done which would not only provide partly prepared material for absorption into the army or reserved forces, but would give a tone and a carriage to all that came under the influence of the system.

381. Direct information on the working of a cadet corps was furnished by Mr. Bennett, Captain of the 1st Cadet Battalion "The Queen's" Royal West Surrey Regiment. His letter on the subject, and some figures illustrative of his experience are printed in the Appendix. Their general effect, so far as it goes, is to negative the presumption of progressive deterioration in the class concerned.

Appendix XXIII.

382. In order to organize existing efforts on a comprehensive and effective basis, the Committee would like to see a central body (whether a branch of the Twentieth Century League or another), in touch with municipal activity, established in every large town, and charged with the duty of supervising and directing voluntary agencies of all kinds and bringing them up to a minimum standard of efficiency. One extremely important field of operation for such an organisation in each town would be the collection of information as to the various kinds of employment open to young people on leaving school—the conditions of employment, rates of remuneration, and relative permanence—with a view to advising them in their choice of an occupation, and thus minimising the evil effects of the kind of temporary and casual employment referred to in paragraph 378.

(c) *Juvenile Smoking.*

383. The question of Juvenile Smoking at the period of life dealt with in this and the preceding sub-section has been given some prominence in evidence, and the Committee have received communications on the subject from the late London School Board and one or two Anti-smoking Leagues. The evidence submitted on the point represents a practically unanimous opinion that the habit of cigarette smoking among boys is a growing one, and that its consequences are extremely deleterious. No actual testimony was forthcoming to prove that early smoking diminishes growth, but Prof. Cunningham mentioned it as one of the causes of physical deterioration, and Dr. Scott was of opinion that scarcely two per cent. of cases of undergrowth had not been habitual cigarette smokers : the experience of a schoolmaster at Longton was quoted to show a distinct inferiority of physique in the case of boy-smokers as against non-smokers, and Mr. Atkins adduced evidence from Colonel Leetham, the late Chief Inspector of Recruiting in Manchester, who has said that "perhaps a third of the rejects from the Army in Lancashire might be attributed to smokers' heart." This is, no doubt, an excessive estimate, but it shows one bad consequence of early smoking, and it is common knowledge that smoking affects the wind and general physical capacity.

384. There appear to be two ways of dealing with the matter which might be of good effect and could be made the subject of a very simple Act of Parliament.

(1.) To prohibit the sale of tobacco and cigarettes to children below a certain age.

All the witnesses were agreed in advocating this step, but there was some difference of opinion as to the age which should be selected. The Committee think that it should at least be sixteen.

(2.) To prohibit the sale of tobacco and cigarettes in sweet shops and other shops frequented by children.

This appears to be a growing practice, though it is impossible to discover the number of such shops licensed for the sale of tobacco. The Committee communicated with the Inland Revenue Office on the subject, and their reply was to the effect that "a licence to deal in tobacco is granted to anyone who asks for it, and no record is kept of whether the holder of such a licence is solely a tobacconist or whether he combines with that business any other trade." Mr. Eyre was of opinion that sweet-stuff shops should not be so licensed, and called attention also to the gambling propensities encouraged by such shops. The Committee agree with the weight of the evidence that licenses for the sale of tobacco should not be given to these shops.

VIII.—SPECIAL SUBJECTS.

385. The Committee now proceed to notice certain special subjects bearing on the general purpose of the inquiry, to which their attention has been called.

i. *Syphilis.*

386. It will be remembered that Professor Cunningham in declaring certain inferior bodily characters to be not transmissible from one generation to another, carefully excluded syphilis from the agencies so indulgently estimated. The general effect of the evidence is to show that syphilis is an active agent in the production of congenital weakness and the degeneracy that accompanies it. "It is the great element" says Dr. Kerr "in congenital blindness and deafness, and in the cases that go blind and deaf—children who have gone to the age of ten or eleven gradually getting blind and deaf." In his opinion all these combined cases were practically due to this cause, presenting the other characteristics of syphilis—interstitial iritis and internal ear deafness, and generally the brain deterioration that goes with it. It can hardly, however, be included among the factors making for progressive deterioration, for Sir Alfred Cooper and the other

Cunningham,
2346-9, 2369-2372.

Scott, 1766-9.

Garnett, 9261-4.

Atkins, 2954-9.

Eyre, 3603.
Fosbroke, 6642-6.
Chalmers, 6202-4.
Garnett, 9134-5.

Eyre, 3605-8, 3678-
3687.
Rees, 4410-2.
Lamb, 11754-6.

Kerr, 851-2.

Cooper, 3815-7.

experts examined on the point, Sir Victor Horsley and Dr. F. W. Mott, all agreed that there was no increase of syphilis; indeed Sir A. Cooper thought there was less, and it was also thought that it had now assumed a less virulent form. This last circumstance was largely attributed by Sir W. Taylor to the precautions taken in India and other tropical stations, by which means the worst taint was kept out of this country. Mr. Tweedy, whose experience of its effects is principally connected with the eye, is under a strong impression that there is nothing like the same amount of secondary and tertiary disease, or disease transmitted to the children, and quoted as a proof the diminution of a disease of the eye, called interstitial keratitis, which is essentially a disease of inherited syphilis. He could not say whether it was due to the existence of less primary syphilis or to the more efficient treatment and care that syphilitic patients now receive.

Horsley, 10627.
Mott, 10502-4.

Taylor, 33-5.

Tweedy, 3776.

387. In describing the consequences of syphilis Sir A. Cooper gives the following sinister category of disease:

"Insanity; idiocy; diseases of bones, producing deformity and disfigurement; diseases of the eyes producing blindness; disease of the ear producing deafness; disease of the internal organs, causing defective nutrition and deficient development; disease of the nervous system, producing insidious forms of paralysis, locomotor ataxy."

And Sir Victor Horsley described with minute care its effects on successive generations:

"The infection at one end of the family or the other may be slight, but you cannot say that any child of such a family, whom you can trace, escapes during its whole life and is really a healthy individual."

It appears in the second generation in the form of what is called disseminated sclerosis and degeneration of the nervous system, an organic disease and a progressive deterioration of a paralytic type which ends fatally after perhaps fifteen or twenty years. Without having any scientific proof of syphilis in the third generation, this witness would be quite prepared to find it, having regard to the severity of the disease in the second generation, and he was certain that a syphilitic condition of the tongue rendered the member more liable to cancer. Numbers of children moreover die within the first six months of life from what is called bronchitis, but a number of those are cases of congenital syphilis of the lungs. It is admitted that syphilis in the female is still more prejudicial to the child than the transmission of the taint through the male, and Sir Victor Horsley considered this a source of general physical deterioration.

Horsley, 10570-1.

Horsley, 10578
10581.

Horsley, 10584-6

388. Two specific points were mentioned in connection with the treatment of the disease, and to these the Committee desire to draw particular attention. It was alleged that, owing to the comparatively small practical inconvenience attending the first visitation of the malady, curative measures were frequently postponed and the tainted persons left to infect others. As a remedy for this Sir A. Cooper and Sir V. Horsley strongly advocated compulsory notification; they were aware of the difficulties and objections on which both Dr. Mott and Dr. Jones laid stress, but having regard to the terrible nature of the disease and its far-reaching effects they thought these should be disregarded and every effort made to arrest its progress. The argument that it might lead people to refuse treatment was, Sir Victor Horsley said, used in connection with simple zymotics at the time of the Notification Act and has been shown to have no validity. Dr. Mott mentioned it as one of the evils of syphilis that at present it so often escapes treatment, and notification would thus be the means of bringing many cases under observation.

Cooper, 3869-3872.
Horsley, 10539-
10543, 10600-1,
10631-2.
Mott, 10469-10471,
10493-5.
Jones, 10891-6,
10912-4.

389. The second point was the inadequacy of hospital accommodation, especially for the poorer classes, and on this all the witnesses were agreed. "Taking the case of London," said Sir Alfred Cooper, "it may be said without fear of contradiction that the accommodation for the treatment of venereal disease is lamentably inadequate." And he went on to indicate how it should be remedied by the addition of special departments to general hospitals for this class of disease. Dr. Mott and Sir V. Horsley both complained of general hospitals not taking cases of syphilis, and Dr. Jones thought treatment in general hospitals preferable on every ground to the lock hospitals system.

Cooper 3849.

Mott 10468, 10486-9.
Horsley 10534-5.
Jones 10892-5.

Horsley 10525-9,
10602-10616.

390. A third point in connection with the disease, to which all these gentlemen attached the greatest importance, was the necessity of inquiry into its nature and prevalence. Sir A. Cooper and Sir V. Horsley put this into the forefront of their recommendations. Owing to the insidious forms that the later stages of the malady assume, the official returns are far from representing the true extent of mortality from syphilis, and death certification is fallacious because, it is said, medical practitioners are reluctant, for fear of possible consequences, to put syphilis on a certificate.

391. In these circumstances, the Committee would desire to see all reference to the "cause of death" eliminated from the statutory death register. The medical opinion as to cause of death should be regarded as confidential, and should never be divulged, as is permissible at present, by the Registrar to the friends of the deceased. The medical certificate should be sent by the local Registrar direct to the Registrar-General, who would use it for the elaboration of his national mortality statistics. In this way the Committee believe that the accuracy of the records would be greatly increased.

Appendix XXIV.

392. The Committee hardly feel qualified at this stage to express a definite opinion on so thorny a subject as notification, although they think the considerations in its favour have great weight, but this point and the question of hospital accommodation may safely be relegated to the Commission of inquiry into the prevalence of the disease which the Committee feel ought to be appointed. A voluntary association, of which Sir J. Crichton Browne and Sir V. Horsley are prominent members, has been in existence for some time, and would be of great service in presenting evidence to any such Commission in a compendious form. The good that has been done by the Tuberculosis Inquiry has stimulated interest on the subject, the recent resolutions of the Brussels Congress point to the urgency of the case, and the Committee are satisfied that the moment is ripe for a searching and exhaustive investigation into the extent of the malady, and for a definite pronouncement on the steps that should be taken, while arresting its progress, to trace and counteract its effects.

ii.—*Insanity.*

393. Syphilis is, as has been seen, one of the principal elements in the manufacture of the insane, and alcoholism has also been shown to contribute its share, but the prevalence of insanity has certain special features which call for separate notice.

394. Besides the evidence on the subject under the above-mentioned heads, the Committee had the advantage of examining Dr. Joseph Wiglesworth, who was selected for the purpose by the Royal College of Physicians, and certain witnesses from Ireland who gave valuable information on the aspect which the question assumes in that country.

Appendix XXVII.

395. Documentary evidence was also put in of some interest to the special objects of the inquiry. The Lunacy Commissioners sent a circular letter in December last to the Medical Superintendents of all the County and Borough Asylums in England and Wales, asking for physical statistics, information or suggestions as to the lines on which steps should be taken to collect such statistics and information. Most of the replies gave information of an inconclusive character, but those which appeared to be useful were, by the courtesy of the Home Office, forwarded for the consideration of the Committee, who have printed a summary of them in the Appendix.

396. In regard to the preliminary, but most important point, as to whether insanity is increasing, it is extremely difficult to give a decided opinion so far as Great Britain is concerned. There is no doubt about the gross increase; the number of persons under treatment relative to population is much greater, but the question is whether this is due to accumulation, or how far it is due to that, and how far to increased incidence of insanity in the people at large.

Wiglesworth, 8927.

397. On this point Dr. Wiglesworth admitted that statistical information was incomplete, and that the conclusions to be drawn from it varied according as it was read and looked at, but on the whole, though he would like to express

himself with reserve, he was inclined to think that the incidence is increasing. He had arrived at this conclusion from careful study of the Lancashire statistics, which, as covering one-eighth of the population of England and Wales, were likely, in his opinion, to afford a reliable indication.

398. Analysing the increase to be accounted for on the theory of accumulation, he acknowledged that there was a large increase in the number of cases sent to the Unions, owing to the growing unwillingness or inability of their relations to charge themselves with their maintenance, and stated further that the poor-law authorities showed a much greater tendency to send on to asylums cases of idiocy, imbecility, and senile weak-mindedness. The diminution of the death-rate is another factor in the process of accumulation.

Wiglesworth 8930-8952.

399. Examining two decennial periods, 1882-1891, and 1892-1901, Dr. Wiglesworth found that the annual average number of lunatics in Lancashire in the first period was 8,247, which is equivalent to a rate of 2·221 per thousand on the average population; in the following decennium that rate had risen to 2·562; if the previous average had not been exceeded, the number of lunatics would have been 9,301, whereas it actually amounted to 10,733, an average increase of 1,432 for the decennium, over and above what might have been anticipated from the increase of population. In trying to ascertain how much of this increase might be accounted for on the theory of accumulation, *i.e.*, the diminution of the discharge rate by deaths or recoveries, he was met by the difficulty that no returns from the workhouses were available. Proceeding to deal with asylums alone, he found that the percentage of deaths in the second decennium stood at 8·89 as against 10·27 in the first, which represented an accumulation of 1,149 persons. The rate of recoveries, however, showed a reversed condition of things. Calculated on admissions (and here it may be as well to observe that the practice of the Lunacy Commissioners is not the same as that of the Registrar General, who is said to have made his calculations on the numbers resident) the rate of recovery had improved in the second decennium to the extent of 4·13 per cent. Had the recovery rate been maintained at the low level of the first decennium, 735 fewer cases would have been discharged than was actually the case, but the more favourable aspect that these figures wear, is to some extent discounted by two indeterminate factors, (1) the number of recoveries that are counted more than once, and (2) the restriction that was placed during this second period on the reception of incurable cases, owing to the lack of accommodation in the various asylums. On the whole, Dr. Wiglesworth calculates that 900 remain thus unaccounted for on the theory of accumulation in the two decenniums he has compared.

400. Among the circumstances conducive to insanity, next to alcoholic and syphilitic conditions, Dr. Wiglesworth gave a high place to density of population and the environment it connotes. This view is conveniently illustrated by certain tables he prepared showing the different unions of Lancashire classified according to the relative incidence of insanity, and the same unions arranged according to the density of the populations as aggregated in towns of different size. Two unions, which are both mainly country districts containing comparatively small aggregates of population, but with a high lunacy rate, Ulverston and Lunesdale, appear as exceptions to this argument, but in each there is a significant decline in population since 1891, for, speaking generally, Dr. Wiglesworth affirms that there appears also to be some relation between a declining population and a high lunacy rate. If this is so, the fact assumes considerable importance in relation to the state of Ireland, and may account for an increase of lunacy in some of the rural districts of England, combined as it probably is with a greater tendency to intermarriage among a reduced population. The observations collected from various asylums, which have been mentioned above, give some colour to the belief.

Appendix XXVI.

Wiglesworth, 8955.

Appendix XXVII.

401. Discussing the connection between insanity and progressive deterioration, Dr. Wiglesworth is at one with other witnesses as to the frightful havoc wrought by alcohol on the nervous system, adding—

"There is reason to believe also, from the great frequency with which a history of gross parental intemperance is found in the antecedents of persons who become insane, that a habit of

Wiglesworth, 83.

excessive drinking tends in some cases to a poisoning of the germ cells of the parent by means of the alcohol circulating in the blood, and a consequent tendency on the part of these germ cells to develop into an organism with an unstable or badly developed brain. This may probably result even if the sperm cells of the father are alone affected."

402. In regard to the effects of syphilis in producing insanity, Dr. Wiglesworth considered it the most important factor in causing the development of general paralysis, and he went on to say—

Wiglesworth, 8999,
and see Appendix
XXV.

"The importance of this disease in connection with the incidence of insanity is emphasised by the fact that general paralysis cannot be considered as a disease of degeneration. A large number of our cases are purely examples of degeneration, and if they did not get insanity they would be very useless to the community. General paralysis cannot, however, be considered as a disease of degeneration. On the contrary, it attacks very frequently persons of exceptional mental and physical energy, who are valuable members of the community, and though an inherited predisposition to insanity has an influence in causing the development of the disease, it is, nevertheless, less hereditary than other forms of insanity. The causes of general paralysis act more readily if there is a tendency by heredity, but at the same time it is a more strictly acquired disease than any other form of insanity."

403. On the whole, while expecting to find an increase of insanity coincident with a growing tendency towards physical deterioration, Dr. Wiglesworth did not appear equally confident that if an increase of lunacy were proved it could necessarily be accepted as evidence of progressive deterioration.

404. There can, it is feared, be no question but that insanity is on the increase in Ireland : according to the published returns the number of lunatics under care in 1880 was 250 per 100,000, or 1 in 400, and in 1902, 499, or 1 in 200, and if the number of idiots and lunatics at large is added, the whole represents 587 per 100,000 or 1 in 170 : moreover, fifty years ago the number is said not to have exceeded 1 in 730. Sir L. Ormsby, who was closely questioned on the subject, was of opinion that considerable allowance must be made for the fact that people are put into asylums now who were never so treated formerly, and the number is swelled by the unwillingness of their relations to take care of old people who get softening of the brain and become slightly demented ; Sir Lambert also referred to the effects of accumulation in raising the rate, as both the death rate and the recovery rate are lower than in England ; but giving full effect to all these considerations, enough remains to excite very serious disquiet. The Bishop of Ross made some notable statements in confirmation of the impression produced by the returns. "Lunacy," he said, "has become so common that it is practically no longer a disgrace," and to this he attributed the loss of any disinclination to make the fact public by the removal of the affected person to an asylum. The number of families affected is so great that apprehension based on the risk of intermarriage ceases to operate, and the Bishop went on to say—

Kelly, 11216.
Ormsby, 12684-
12702.
Kelly, 11217.
Ormsby, 12691.

"I have a very serious difficulty in that way, because, according to the Canon Law, I am bound, as a bishop, not to admit amongst the clergy any person whose relations within certain degrees are affected with insanity, and if I draw a line very strictly I would exclude practically all the applicants, so that I cannot draw the line too strictly."

405. In estimating the causes of this state of things, syphilis, at any rate, must be excluded. Except in Dublin, there is said to be very little syphilis in Ireland. Sir L. Ormsby, in gathering information from Sir George O'Farell and Dr. Courtenay, the two inspectors of Lunacy, and from Dr. Woods, the medical inspector of the Cork Asylum (the largest outside Dublin), was told that it is very seldom that they put down syphilis as a cause of insanity. General paralysis of the insane is also less common, and although the taste for drink is still, in many parts of Ireland, regrettably strong, there is no evidence of increased drunkenness that could account for the increase of lunacy.

406. The cause that the inspectors are disposed to lay principal stress upon is heredity, and here the same agency appears that has already been held responsible for the depletion of the population in the rural districts, viz : emigration. The effects of this extensive emigration have been thus noted by a competent authority :—

(1) Depletion of the population ; (2) a lowering of the marriage-rate ; (3) alteration of the age distribution of the population ; (4) lowering of the birth-rate ; and (5) depending upon the lowered birth-rate a diminished natural increase of the population.

These five factors acting in sequence and conjunction disturb the normal stability of the population, and induce conditions which are favourable to the production of insanity.

The depletion of the population, as has been seen, chiefly affects its sexually efficient units, and by so doing tends to lower the marriage-rate among the remaining sexually potent units in the population. The growing disinclination to marriage is one of the most observable features in the vital statistics of the country.

407. On the whole, it appears to the Committee that there are more grounds in Ireland than can be discovered in England for connecting increase of lunacy with conditions of physique which show signs of progressive deterioration. In regard to certain classes in Dublin, Sir L. Ormsby was convinced that there was evidence of progressive deterioration, and Sir Charles Cameron seemed to share the same belief. It is not only that the effect of migration into the towns is to make the next generation of a weaker type, but in Sir L. Ormsby's opinion the people who come into the towns from the rural districts are of a weaker type to start with and therefore more vulnerable to the noxious influences of urban existence. From the facts that came under his knowledge, the Bishop of Ross was likewise of opinion that there was physical deterioration amongst the people, and seemed to look upon the increase of lunacy, particularly among girls between 18 and 20, as the strongest evidence of its existence. The Committee think that, having regard to the special conditions that appear to prevail in Ireland, investigation should be undertaken at an early date into the extent and character of the increase of lunacy in that country, and a serious effort made to trace it to causes which might be the subject of some ameliorative interference.

Ormsby, 12640

Cameron, 10917.

Ormsby, 12641.

Kelly, 11163,
11202-7.

iii. Eyes and Ears.

408. The evidence on the subject of defective eyesight does not point (a) *Eyes*. to the conclusion that blindness, or tendencies towards it, is on the increase, still less that the actual conditions of the eye afford any index of deterioration. Speaking from the experience of a very large hospital and private practice, Mr. Tweedy said :—

"I do not see there is any evidence, so far as the eyesight of the population is concerned, of any physical deterioration of the people; there is no evidence in the eyes that degenerative diseases are more common than they were." Tweedy, 3746.

And he went on to attribute any apparent increase in optical defects to the Tweedy, 3757-9. greater knowledge and care with which they are treated, the connection between optical defect and headache being much more understood and noted than formerly. Mr. Tweedy, however, mentioned one rather curious fact, viz., the frequency with which really degenerative types of disease occur in people from the rural districts, and gave as an example the greater degree in which *retinitis pigmentosa*, an essentially degenerative malady, is met with in such persons. This he was inclined to attribute to the intermarriage of blood relations, among the offspring of whom the disease is often found.

409. Dr. Eichholz appealed to the evidence of the Census and of the London School Board Schedule to show that there is a distinct decrease in blindness and deafness among adults and children.

"In the last ten years—in 1891 the blind adults numbered 3,573 (one in 1,186), and in 1901 the number was 3,556 (one in 1,275). Deaf mute adults were 5,023 (one in 930), in 1901; and in 1891 they were 4,787 (one in 883). Then coming to the children of school age, in 1891 in the case of the blind it was one in 1,844, and now they are one in 2,233. In the case of the deaf, in 1891 it was one in 744, and it is now one in 866."

Eichholz, 552.

It is noteworthy that the recruiting returns do not show a similar Appendix VI., VII improvement in respect of those rejected during the last ten years for defective vision.

410. Carelessness at birth is a fertile source of infantile eye disease. "Half the cases," said Dr. Kerr, "of blind children in the blind-schools are due to ophthalmia caused by infection at birth." The Committee believe Kerr, 825-9.

that the provisions of the Midwives Act, if properly enforced, will have a signal effect in reducing blindness from this cause.

Kerr, 812-6

411. Dr. Kerr further considered that the methods pursued in many infant schools were responsible for the development of visual defects ; 95 per cent. of over 1,000 infants examined for the purpose between the ages of 6 and 6½ managed to reach the standard of normal visual acuity in London, but among older children it was found that 10 per cent. had exceedingly defective vision. "The conditions," he says, "are bad for infants' eyesight in every way; the work is too fine." This subject has been mentioned in an earlier section of this Report, but these facts point to the want of some general provision for testing visual acuity in all schools under proper medical supervision. Mr. Tweedy laid great stress upon this and noted the good that had already been done by the experimental application of the system to Board Schools and High Schools. The testing of eyesight, whether for colours or objects, should, he thought, take place in childhood, before time has been wasted in acquiring technical knowledge, which defective vision may render useless.

Tweedy, 3771-5,
3778-3781.

412. In the judgment of the same authority, the prevalence of short-sightedness must not be associated with ophthalmic degeneracy; the long-sighted eye of primitive man has hitherto been the normal eye in England, but it appears as if it were gradually being replaced by the short-sighted eye of civilised man, to whom, as he mostly works within a yard of his eyes, short sight, so long as it is healthy, is a positive advantage. The evidence already mentioned as to a marked diminution in those forms of eye disease which are connected with congenital syphilis confirms the belief that no proofs of degeneration are to be found in the conditions touching the eyesight of the people.

(v) Ears
413. In regard to the condition of the ears, the Committee had the evidence of Mr. Arthur Cheatle, who recently conducted an investigation into the hearing of 1,000 school children between the ages of 3 and 16 in the Hanwell District School (including the Ophthalmic School), which receives the children of the poorest class from Southwark and the City of London, and, so far as the Ophthalmic School is concerned, from the Metropolitan Poor Law Schools, all being thus of a type exposed to degenerative influences from birth. Of the children examined, 341, or 34 per cent., had normal ears and hearing, and 449, or 45 per cent., were suffering from adenoids in some form or other.

Cheatle, 12830-
12844.
Cheatle, 12851,
et seq.
414. It is from the prevalence of this ailment that most of the deafness observable arises, but Mr. Cheatle was unable to associate it with degenerative tendencies, as it was found in all classes, being, as he admitted, quite as common where children are in healthy surroundings as among the poor. Further, Mr. Cheatle was not prepared to say that it is more prevalent now than it was some years ago, as the indications given by pictures seem to show that at any rate among the upper classes it has always been common. The effects of it, on the other hand, are distinctly degenerative; it produces mouth breathing with all its attendant evils, imperfect expansion of the lungs, want of proper oxygenation of the blood, contracted chest and stunted growth; it tends to increase vulnerability to all zymotic diseases, produces defective dentition by the contraction of the upper jaw which it favours, and leads to broken sleep by inducing the habit of snoring. The only remedy is the removal of the adenoids, and with a view to that remedy being adopted at the earliest possible moment, Mr. Cheatle advocated the medical inspection of schools, or, at least, the reference to a doctor of any case in which, by the application of proper tests, the teacher discovered signs of defective hearing. Looking to the permanent disablement and marked dulness which are associated with deafness in the young, the Committee think that the case for the medical inspection of schools is greatly strengthened by the means it offers for dealing promptly and adequately with this class of "retarded" child. A timely interference may not only prevent their becoming later a serious charge upon the community, but may supply a necessary check to tendencies which, if unheeded, would render the victims useless to society.

415. Mr. Cheatle was not able to say that deafness due to congenital syphilis had diminished, but he did not think it had increased.

ir. Teeth.

416. In the first part of this Report, Professor Cunningham's testimony to the anatomical fact tending to favour dental deterioration was quoted. There is no question that the teeth of the people have become much worse of late years, and in many parts of the country may now be described as very bad. On this point there is no difference of opinion, though the acuteness of the evil is said to vary much, and may in some cases be affected by local causes. While affirming the indirect consequences that may flow from the gradual contraction of the jaw, Professor Cunningham had no difficulty in assigning the real cause of dental degeneration to the change that had taken place in the character of the food in common use. Sir Lauder Brunton laid great stress on the fact that dental caries is due to the cessation of the use of food which requires good mastication, and added that the soft foods are more apt to leave particles behind which cause decay. This view, and the aggravation that lack of cleanliness lends to the conditions of the mouth so produced, were emphasized by a succession of witnesses, lay and professional.

417. Mr. W. H. Dolamore, who attended on behalf of the British Dental Association, and laid before the Committee (i.) a statement of the results obtained by a Committee of the Association appointed to investigate the condition of the teeth of school children, and (ii.) a Report of the Hygienic Committee of the Association on the alleged increase of dental caries, both of which will be found in the Appendix, confirmed these opinions. He had no doubt that bad teeth were a condition of the feeding that accompanies high civilization. The ruder and coarser sorts of food at one time in use not only kept the jaw in action during the plastic period of its development, but had the effect of a tooth brush in keeping the teeth free from the settlement of toxic agents.

418. On the vexed point of the presence of sufficient lime in teeth, Mr. Dolamore agreed that, as a matter of fact, caries is just as often found in teeth with their proper elements of lime as in teeth which are defective in lime, and stated that, so far as chemical analysis went, there was not much difference between what are called soft and hard teeth, but he seemed to think that investigations into the character of the enamel might produce different results.

419. Though no doubt bad teeth generally accompany deterioration of physique, and are often the result of bad conditions in childhood, there are happily no grounds for associating dental degeneracy with progressive physical deterioration. On this point Sir L. Brunton is as emphatic as any other witness, including Mr. Dolamore. It is not a little curious in this connexion, that it was found upon examination of two schools in Edinburgh that the ratio of defective permanent teeth per 1,000 children was 158·2 in the school for children of well-to-do working people, and 273·9 in that for the children of a better class, professional men and merchants. According to Mr. Dolamore, "It is undoubtedly the better class schools, in my experience, where the teeth are the worst—the higher the class the worse the teeth." And this appears to be the general opinion.

420. In the result of a recent Admiralty and War Office Interdepartmental Conference on the subject, it was held that deterioration of teeth is intimately connected with a variety of intricate causes affecting the general health of the nation, but that mal-nutrition plays but a very small part in the production of dental caries, as compared with the more common

Legge, 5919.

Cunningham,
2225-9, 2363-8.

Brunton, 2461-9.
Taylor, 43.
Smyth, 1216-8.
Collie, 3987.
Fosbroke,
6638-6641.
Murphy, 9464-5.

Appendix XXVIII

Dolamore,
7073-7082.

Dolamore,
7088-7092.

Brunton, 2460-1,
2524-8.
Dolamore, 7123-
7131.

Appendix XXVIII

use of articles of food which readily undergo acid fermentation, and that it is neglect to keep the mouth clean that is chiefly responsible for the decay of teeth.

421. In this opinion the Committee concur, and they also agree with the recommendations which the Conference decided to make to the Board of Education on the subject—

1. That the teaching of the elements of hygiene should be made compulsory in schools, and in this teaching the care of the teeth should receive special attention.
2. That daily cleansing of the teeth should be enforced by parents and teachers.
3. That systematic examination of the teeth of children by competent dentists, employed by school authorities, should be practised where possible, to prevent caries extending, to stop carious teeth, and to remedy defects of the teeth.

The Committee believe that if to these precautions are added systematic instruction to mothers, through the medium of health visitors, as to the proper food for infants, so that dentition may not be delayed or imperfect, much will be done towards removing a condition of things which, though it is not an indication of degeneration, contributes to the causes that produce it by the poison dental caries introduces into the system and the gastric disorders that follow therefrom.

v. Vagrancy and Defective Children.

422. Two other matters have been mentioned, viz.: vagrancy and the condition of defective children, and some evidence was given on the first named by Mr. Loch and "Colonel" Lamb; but the Committee have not thought it necessary to consider them in this Report, as it is understood they are to be the subject of separate enquiries.

PART III.

SUMMARY OF RECOMMENDATIONS.

423. The following is a summary of the principal recommendations which the Committee desire to make:—

Pars. 55-61, 189-190.

(1) *Anthropometric Survey.*

With a view to the collection of definite data bearing upon the physical condition of the population, the Committee think that a permanent Anthropometric Survey should be organised as speedily as possible upon the lines indicated in Part I. of the Report. In the first instance, this Survey should have for its object the periodic taking of measurements of children and young persons in schools and factories, enlisting for this purpose the assistance, among others, of School Teachers and Factory Surgeons, supplemented by a small staff of professional Surveyors. Besides this, a more comprehensive and specialist survey, spread over a longer period, of the population of the country at large, might be undertaken.

Par. 62-3.

(2) *Register of Sickness.*

It appears to the Committee in the highest degree desirable that a Register of Sickness, not confined to infectious diseases, should be established and maintained. For this purpose the official returns of Poor Law Medical Officers could, with very little trouble and expense, be modified so as to secure a record of all diseases treated by them. And, further, it ought not to be difficult to procure the co-operation of hospitals and other charitable institutions throughout the country, so as to utilise for the same purpose the records of sickness kept by such institutions.

Loch, 10336-10367.
Lamb, 11528-11553.

(3) *Advisory Council.*

Par. 64-6, 124, 302.

The Committee are emphatic in recommending the creation of an Advisory Council, representing the Departments of State, within whose province questions touching the physical well-being of the people fall, with the addition of members nominated by the medical corporations and others, whose duty it should be, not only to receive and apply the information derived from the Anthropometric Survey and the Register of Sickness, but also to advise the Government on all legislative and administrative points concerning public health in respect of which State interference might be expedient; and to them might be remitted for consideration and report all the problems affecting public health which the requirements of a complex social organisation are constantly bringing to the front. Such a Council, the composition of which might be modelled to some extent on *Le Comité Consultatif d'hygiène publique de France*, would be, the Committee believe, of great assistance, especially to the Local Government Board, and would be calculated to supply the knowledge and stimulus which are necessary in order to give to the Public Health side of the Board's administration a prominence which the multiplicity of its other functions may have tended to obscure, and to attract to its work that measure of public interest and support which has perhaps been lacking hitherto.

(4) *Overcrowding.*

Par. 87-9.

The Committee believe that the time has come for dealing drastically with this problem. They advocate an experimental effort by the Local Authority in certain of the worst districts, in the direction of fixing a standard and notifying that after a given date no crowding in excess of such standard would be permitted. It is believed that, if the thing were carried through without hesitation or sentimentality, means would be found, through the ordinary channels of supply and demand, or within the sphere of municipal activity, for housing all but the irreclaimably bad.

(5) *Labour Colonies and Public Nurseries.*

Par. 90-2.

It may be necessary, in order to complete the work of clearing overcrowded slums, for the State, acting in conjunction with the Local Authority, to take charge of the lives of those who, from whatever cause, are incapable of independent existence up to the standard of decency which it imposes. In the last resort, this might take the form of labour colonies on the lines of the Salvation Army Colony at Hadleigh, with powers, however, of compulsory detention. The children of persons so treated might be lodged temporarily in public nurseries or boarded out. With a view to the enforcement of parental responsibility, the object would be to make the parent a debtor to society on account of the child, with the liability, in default of his providing the cost of a suitable maintenance, of being placed in a labour establishment under State supervision until the debt is worked off.

(6) *Building and Open Spaces.*

Par. 97-9, 125.

Local Authorities in contiguous areas which are in process of urbanisation should co-operate with a view to securing proper building regulations, in furtherance of which end the making of Building Bye-laws to be approved by the Local Government Board should be made compulsory on both urban and rural authorities; attention should also be given to the preservation of open spaces with abundance of light and air. By the use of judicious foresight and prudence the growth of squalid slums may be arrested, and districts which hereafter become urbanised may have at least some of the attributes of an ideal garden city.

Par. 105.

(7) *Smoke Pollution.*

The Committee strongly advocate that cases of pollution of the air by smoke and noxious vapours in manufacturing districts should be heard by a stipendiary magistrate. A stricter enforcement of the law, and a change in legislation, giving higher penalties, would produce a great improvement without imposing any serious burden on manufacturers. It should also be considered whether the responsibilities of the ordinary householder in regard to domestic smoke pollution might not be brought home to him.

Par. 117.

(8) *Register of owners of houses.*

It should be the duty of the Local Authority in all towns above a certain size to establish and maintain an accurate register of owners; this is one of the first *desiderata* towards dealing with slum property.

Par. 118.

(9) *Medical Officers of Health.*

A Medical Officer of Health in all areas above a certain population should be required to give his whole time to the work, and in no case, unless convicted of misconduct, should a Medical Officer of Health so engaged be removed without the consent of the Local Government Board.

Par. 119.

(10) *County and District Councils.*

With a view to strengthening the chain of responsibility in matters of local administration, County Councils should be empowered when necessary, after a reference to the Local Government Board, to act in default of urban (other than municipal boroughs) and rural sanitary authorities within the area of their administration, for all purposes of the Public Health and Housing Acts, to which end the appointment of Medical Officers of Health who would give their whole time should be made obligatory on County Councils.

Par. 120-4.

(11) *Reports from Local Authorities.*

The Local Sanitary Authority in each district should be required to furnish to the Local Government Board, through the County Authority, reports according to certain specified requirements, which would show accurately what was being done, or left undone, in matters of sanitation and administration generally, and would thus form a basis of comparison between different districts. Armed with this information it should be the duty of the Central Authority to watch closely local administration, and to endeavour constantly to level up backward districts to the standard attained in the best administered areas.

Par. 135-6.

(12) *Law as to Insanitary and Overcrowded House Property.*

Nothing has been brought more prominently to the notice of the Committee than the ignorance that prevails, even in quarters which ought to be well informed, as to what the law and the powers it confers are. A statement on this subject was prepared for the Committee, with the assistance of the Local Government Board; and it appears to them that the Board could not do better than issue it, with such additions as they think proper, to all Local Authorities.

Par. 153.

(13) *Medical Inspection of Factories.*

The existing powers of Certifying Factory Surgeons should be extended, (1) so as to enable them to examine employees for purposes of qualification at a later age than sixteen, (2) so as to enable them to

re-examine, when necessary, at definite intervals. Further, even if it be necessary that Inspectors of Factories and Medical Officers of Health should have, to some extent, co-ordinate powers with regard to insanitary conditions in factories, an arrangement should be made whereby each authority should notify to the other any defects that may be apparent, although coming within the other's province. Similarly it should be the Certifying Surgeon's duty to notify to the Factory Inspector or the Medical Officer of Health, as the case may be, such defects as may come under his notice.

(14) *Over-fatigue.*

Par. 147.

As a preliminary to any further legislation on the subject of hours of employment, particularly employment of women and children, it is, in the view of the Committee, highly desirable that there should be a strictly scientific enquiry into the physiological causation and effects of over-fatigue, as recommended by the Brussels Congress.

(15) *Coal Mines.*

Par. 156.

The medical examination of young persons should be extended so as to cover those employed in coal mines.

(16) *Workshops.*

Par. 158.

The inspection and supervision of these, as distinguished from factories, should be strengthened. On the question whether this work should be undertaken by the Local Authority or the Home Office, the Committee are not in a position to make a definite recommendation. But one point in particular that calls for consideration is the propriety of making employment of children and young persons in workshops, dependent, as it is in factories, on a medical certificate.

(17) *Alcoholism.*

Par. 173-183.

The Committee believe that more may be done to check the degeneration resulting from "drink" by bringing home to men and women the fatal effects of alcohol on physical efficiency than by expatiating on the moral wickedness of drinking. To this end they advocate the systematic, practical training of teachers to enable them to give rational instruction in schools on the laws of health, including the demonstration of the physical evils caused by drinking. At the same time, the Committee cannot lose sight of the enormous improvement which has been effected in some countries, and might be effected in this country, by wise legislation.

(18) *Education in Rural Schools.*

Par. 193-5.

With a view to combating the evils resulting from the constant influx from country to town, the Committee recommend that every effort should be made by those charged with the conduct and control of rural schools to open the minds of the children to the resources and opportunities of rural existence.

(19) *Rural Housing and Allotments.*

Par. 192, 197.

Local Authorities in Rural Districts should apply themselves to remedying the dearth of cottages which exists in many parts of the country, by the exercise of their powers under Part III. of the Housing Act, 1890, as amended by the Act of 1900. If necessary, these powers might be supplemented by the introduction of some such machinery for putting them in motion as is contained in the Labourers' (Ireland) Acts, 1883-1903. It should also be seriously considered whether the experiment, for which there are legislative facilities, of dividing land into small holdings, might not be tried more frequently.

Par. 229-232.

(20) Food and Cookery.

For the purpose of bringing home to the people the importance of properly selected and carefully prepared food, there is much room for training of a socially educative character among girls and young women. To this end the teaching of cookery in schools should be guided by the principles laid down in Paragraph 232 of the Report. Even more may be done by mothers' meetings and lectures, and the distribution of leaflets on the subject. Continuation classes for girls beyond school age should be organized, attendance at which should be compulsory, subject to the exercise of a judicious discretion on the part of the School Authority.

Par. 227.

(21) Cooking Grates.

It should be provided by law that every dwelling let for the occupation of a family, should include a grate suitable for cooking.

Par. 233.

(22) Adulteration.

It would be highly expedient that the Local Government Board should be authorised to fix a standard of purity for all foods and drinks, in the same manner as standards for milk and butter have been fixed by the Board of Agriculture.

Par. 241-2.

(23) Infant Mortality and Employment of Women.

In order to arrive at some conclusion as to the connection between these two, (1) the infant mortality rates should be localised for particular areas in industrial towns, (2) general infant mortality rates for selected industries throughout the country should be taken, (3) the occupations (if any) of all mothers (married or unmarried) should be shown in the Registrar-General's records.

Par. 242.

(24) Still-births.

Still-births should be registered.

Par. 243, 391.

(25) Medical Certificates as to Cause of Death.

A medical certificate as to the cause of death should invariably be required before the death of any child, or indeed of any other person, is registered. Moreover, the medical certificate should be regarded as confidential, and its contents should never be divulged by the Registrar, as is permissible at present, to the friends of the deceased. It should be sent by the local Registrar direct to the Registrar-General.

Par. 262.

(26) Employment of Women in Factories.

The Committee do not think that the period during which employment after confinement is prohibited could be extended without counterbalancing disadvantages. But the law should certainly be strengthened, so as to place upon the employer the burden of obtaining proof that the required period has elapsed since the confinement of the women he employs, or, in the alternative, so as to prohibit future employment in the absence of (1) a medical certificate that it will not be prejudicial to their physical well-being, and (2) proof that reasonable provision is made for the care of their infants. This might take the form of a crèche, or be secured by the recognition for the purpose of a duly licensed body of women.

(27) *Provident Societies and Maternity Funds.*

Par. 263.

Charitable efforts in manufacturing towns might well be directed towards endowing and maintaining insurance organisations to which employees, assisted by voluntary subscriptions, could contribute while in work, and from which they might receive assistance during the period of confinement and afterwards.

(28) *Milk Supply.*

Par. 273.

With a view to ensuring the purity of the supply of milk to the community, the Committee think that the measures indicated in Paragraph 273 of the Report should be taken; in default of the Local Sanitary Authority taking proper precautions, the County Council should in all cases be authorised to act, and it should be the duty of the Local Government Board to intervene in the ultimate resort.

(29) *Feeding of Infants.*

Par. 277.

The Committee are impressed with the enormous sacrifice of infant life due to insufficient or improper feeding. The ultimate remedy lies in that social education already described, and the Committee advocate the systematic instruction in continuation classes of girls in the processes of infant feeding and management. They also recommend the issue to mothers in every district of leaflets on the rearing of babies similar to those used in Sheffield and Wakefield; this could be done by the municipality, by voluntary associations, or by the Registrar on the registration of every infant.

(30) *Milk Depôts.*

Par. 279.

It is of great importance that the milk supply should pass through as few hands as possible, and that milk vendors should not be general dealers whose sale of milk is confined to a few quarts. In order to effect these objects, milk depôts should be formed in every town, obtaining their supply direct from the farms. The Committee believe this could be done without recourse to direct municipal action, but they think that in all improvement Bills promoted by Local Authorities, the insertion of provisions dealing with the milk supply within their area should be insisted on.

(31) *Sterilisation and Refrigeration.*

Par. 280-1.

Having regard to the acute difference of medical opinion as to the effects of sterilisation, the Committee recommend an investigation into the whole subject by a small body of experts. Milk, when drawn from the cow, should at once be refrigerated to a temperature of 40 degrees Fahrenheit.

(32) *Midwives.*

Par. 295, 410.

The Committee desire to call the attention of Local Authorities to the provisions of the Midwives Act, 1902, which may be made an instrument of the greatest utility for the dissemination among mothers of proper knowledge and practical advice.

(33) *Training of Mothers—Health Associations.*

Par. 297-302.

While laying special stress on the need for education of the young in matters of hygiene and domestic economy, the Committee believe even more may be done in the direction of training the mothers of the present generation

in these matters. To this end, Health Societies on the lines of the Manchester and Salford Ladies' Health Society should be formed all over the country. Enough has been said of the value of the system by competent judges to justify the Committee in urging upon every locality the adoption of similar methods. They would further suggest to the Local Government Board the expediency of issuing to Local Authorities a circular explaining the objects to be sought and the means by which they can best be attained.

Par. 305.

(34) *Elementary Schools in Ireland.*

It appears that the elementary school system prevailing in Ireland urgently requires amendment in regard to warming of schools and hygienic conditions generally.

Par. 307.

(35) *School attendance in rural districts.*

The Committee think that school attendance in rural districts should not be compulsory till the age of six or possibly seven, and should be discouraged, if not absolutely prohibited, under five.

Par. 308-9.

(36) *Games and exercises for school children.*

It is desirable that more attention should be given, with the assistance, where possible, of voluntary agencies, to organizing games for school children, and for that purpose much greater use should be made both of school and public playgrounds than at present. But the Committee are of opinion that no scheme of games alone can ever be made general enough to supply the place of methodical physical training, and they hope that the course of physical exercises referred to in Paragraph 308 will find general acceptance with Local Authorities. While they consider that such exercises should, when possible, be taken in the open air, they would urge upon Local Authorities the expediency of providing play-sheds or rooms other than the ordinary class-rooms in which the exercises may be conducted regularly without interruption from the weather.

Par. 310-314.

(37) *Cookery, hygiene, and domestic economy.*

Instruction in these matters should, as far as possible, be made compulsory on the elder girls at school, and care should be taken that it is placed in the hands of properly qualified teachers, to which end it is expedient that some State aid should be given under proper conditions to schools of cookery at which teachers are trained, and that hygiene in its various branches should be made an essential element in the course of training for all teachers.

Par. 315.

(38) *Partial exemption from school.*

It should be considered whether the present law might not be modified so as to make it possible for a child under fourteen years of age to obtain partial exemption from the obligation to attend school, on no other condition than that of continuing to attend school up to a later age for certain specified periods and for special subjects of instruction.

Par. 317.

(39) *Special schools for "retarded" children.*

The Committee think that special schools of the Day Industrial School type might with advantage be established for the temporary treatment of children who are not up to normal school standard and are yet not so defective as to warrant treatment as "mentally deficient."

Par. 318.

(40) *Special magistrate for juvenile cases.*

In all cases touching the young where the assistance of a magistrate is invoked, he should, where possible, be a specially selected person sitting for the purpose.

(41) *Medical inspection of school children.*Par. 320-6, 411,
414, 421.

The Committee are emphatic in recommending that a systematised medical inspection of children at school should be imposed as a public duty on every school authority, and they agree with the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. With the assistance of teachers properly trained in the various branches of hygiene, the system could be so far based on their observations and records that no large and expensive medical staff would be necessary. The lines on which the inspection should be conducted are laid down in paragraphs 323-326 of the Report.

(42) *Feeding of elementary school children.*

Par. 358-365.

The Committee recommend that definite provision should be made by the various Local Authorities for dealing with the question of underfed children in accordance with the methods indicated in paragraphs 358-365 of the Report. The Committee, it will be seen, do not contemplate any one uniform method of procedure, but think that regard should be had to the varying circumstances of different localities. They also suggest safeguards against economic abuse.

(43) *Physical exercise for growing girls.*

Par. 372.

If physical exercise of a recreative character were included in the curriculum in the obligatory evening continuation classes for girls, the establishment of which has already been recommended, it would be likely to add greatly to the value and ultimately, it may be, to the popularity of such classes.

(44) *Crèches.*

Par. 373.

Wherever it was thought desirable, owing to the employment of married women in factories, or for other reasons, to establish municipal crèches, girls over fourteen might be made to attend occasionally, and the teaching of infant management to such girls should be eligible for aid from the grant for public education.

(45) *Open spaces and gymnastic apparatus.*

Par. 379.

It should be the duty of Local Authorities to provide and maintain open spaces in some proportion to the density of the population, and such spaces, or some of them, should include shelters fitted with gymnastic apparatus. Every effort should also be made to put such apparatus to the best possible use by placing it in charge of a competent instructor.

(46) *Clubs and cadet corps.*

Par. 379.

Having regard to the enormous value to the physique of growing lads of these institutions, and to the possible saving of expenditure in other directions resulting therefrom, the Committee are of opinion that some grant should be made from the National Exchequer in aid of all clubs and cadet corps in which physical or quasi-military training, on an approved scheme, is conducted, subject to public inspection.

(47) *Physical exercise for growing boys.*

Par. 380.

Lads should be made to attend evening continuation classes, in which drill and physical exercises should take a prominent place; and, with a view to the encouragement of clubs and cadet corps, exemption from

the obligation might be granted to all enrolled and efficient members of such organizations as submitted to inspection and conformed to the regulations qualifying them for public aid.

Para. 382.

(48) *Organization of existing institutions for the welfare of lads and girls.*

In order to organize existing efforts on a comprehensive and effective basis, the Committee would like to see a central body, in touch with municipal activity, established in every large town, and charged with the duty of supervising and directing voluntary agencies with a view to bringing them up to a minimum standard of efficiency.

Par. 384.

(49) *Juvenile Smoking.*

The Committee recommend that a Bill should be brought before Parliament at an early date, having for its object, (1) to prohibit the sale of tobacco and cigarettes to children below a certain age, (2) to prohibit the sale of tobacco and cigarettes in sweet shops and other shops frequented by children.

Par. 392.

(50) *Syphilis.*

The Committee recommend the appointment of a Commission of Inquiry into the prevalence and effects of syphilis, having special regard to the possibility of making the disease notifiable and to the adequacy of hospital accommodation for its treatment.

Par. 407.

(51) *Insanity in Ireland.*

The Committee recommend that investigation should be undertaken at an early date into the extent and character of the increase of lunacy in Ireland.

(52) *Teeth, Eyes, and Ears.*

Par. 411, 414, 421

The Committee are of opinion that the care of the teeth should receive special attention in the teaching of the elements of hygiene in schools, that daily cleansing of the teeth should be enforced by both parents and teachers, and that systematic inspection of the teeth, eyes, and ears of school children should be undertaken as part of that general medical inspection which has already been recommended.

(53) *Vagrancy; Defective Children.*

Par. 422.

The Committee wish to record their belief that the proposed inquiries into these subjects will be of great value.

CONCLUSION.

424. The Committee hope that the facts and opinions they have collected will have some effect in allaying the apprehensions of those who, as it appears on insufficient grounds, have made up their minds that progressive deterioration is to be found among the people generally. At any rate the Committee believe that their labours will result in giving matter for reflection to those who realize the importance of evidence towards the determination of issues of such uncertainty and complexity, and that these persons, who they would fain hope are the larger portion of the thinking community,

will await the necessary steps being taken to secure that body of well-sifted and accurate information, without which it is impossible to arrive at any conclusion of value as to the general problem.

425. It may be argued that there is here no immediate remedy, and that years must elapse before the lack of knowledge is supplied; but in regard to those evils, the existence of which is admitted, the Committee have recognised what can be done in the interval, and are confident that if their recommendations are adopted a considerable distance will have been traversed towards an amendment of the conditions they have described.

426. In the carrying out of their recommendations for the rectification of acknowledged evils, the Committee do not rely upon any large measure of legislative assistance; the law may with advantage be altered and elaborated in certain respects, but the pathway to improvement lies in another direction. Complacent optimism and administrative indifference must be attacked and overcome, and a large-hearted sentiment of public interest take the place of timorous counsels and sectional prejudice.

427. The Committee cannot conclude their Report without a cordial acknowledgment of the debt they owe to the zeal, diligence and ability of their Secretary, Mr. E. H. Pooley, who has been of the greatest service to them throughout the inquiry; and they also desire to recognise their obligations to the Royal Colleges of Surgeons and Physicians for the assistance rendered by those bodies, in expressing their opinion on points submitted to them and in the selection of witnesses.

We have the honour to be,

Your Lordship's obedient Servants,

ALMERIC W. FITZ ROY.
G. M. FOX.
JAMES G. LEGGE.
H. M. LINDSELL.
G. T. ONSLOW.
J. STRUTHERS.
JOHN F. W. TATHAM.

ERNEST H. POOLEY, SECRETARY.

July 20th, 1904.



APPENDICES.

APPENDIX I.

(a) ORIGINAL MEMORANDUM PREPARED BY SURGEON-GENERAL SIR WILLIAM TAYLOR, K.C.B., DIRECTOR-GENERAL, ARMY MEDICAL SERVICE.

1. A deep interest has been aroused, both in the lay and medical press, by the writings of Sir Frederick Maurice and others, who have brought into prominence certain observations pointing to the fact that there is an alarming proportion of the young men of this country, more especially among the urban population, who are unfit for military service on account of defective physique.

The questions naturally arise as to whether this impeachment of the national health has a solid foundation in fact, and as to whether the condition is true of the population as a whole, or only of a certain section of it. The teaching of public health statistics would appear to show that progressive improvement of the national health has steadily followed the improved conditions of life which have been brought about by the advance of sanitary knowledge and its practical application. It has also been pointed out that athletic records are constantly being broken for all sorts of feats of strength, agility, and endurance, facts which would seem to indicate that the physique of the well-to-do classes, at least, is improving rather than deteriorating. It is nevertheless true, and the fact is a disturbing and disquieting one, that a very large proportion of the men who offer themselves for enlistment in the Army are found to be physically unfit for military service.

2. In an article on the National Health, which appeared in a recent number of the *Contemporary Review*, Sir Frederick Maurice states that, according to the best estimate he had been able to arrive at, it has been for many years the case that out of every five men who wished to enlist, and primarily offer themselves for enlistment, you will find that by the end of two years' service there are only two men remaining in the Army as effective soldiers. Of the men who offer themselves, some are rejected by the recruiting sergeant or recruiting officer, some by the examining medical officer, and some, though enlisted, are found after three months to be unlikely to develop into effective soldiers and are summarily discharged. According to General Maurice's experience, at the end of two years not more than 40 per cent. of the men who wished to become soldiers will be found serving; or, in other words, 60 per cent. of the men offering themselves are physically unfit to serve as soldiers. He points out that it is no good talking of conscription or of any form of compulsory service if we already have five men offering themselves for every two men who are fit for the work; no one has suggested that we should increase our Army in the proportion of two to five. *i.e.*, make it two and a-half times as large as it is now. He then goes on to say that no nation was ever yet for any long time great and free, when the army it put in the field no longer represented its own virility and manhood.

3. But the want of physique, thus shown to exist with regard to a large section of the community, is not only

serious from its military aspect, it is serious also from its civil standpoint, for if these men are unfit for military service, what are they good for? As Sir Lauder Brunton says—"Poor in physique as they all are, and poor in mental capacity and power of application as many of them must be, what becomes of them? Many of them probably marry girls as weak as themselves, and have children, some of whom go to swell the lists of infant mortality, some to join the criminal classes, while others grow up more weak and incompetent than their parents." Inquiry is wanted, and it is vital for us to know the truth. Whether part of the physical deterioration is the result of unskilled labour flocking to the towns and there failing to find means for properly rearing a family, or whether it be on account of causes which are attackable, such as early marriages and the ignorance of mothers; the result is that the rising generation of all below the artisan class includes a vast number of men of a very low standard of health and physique.

4. Regarding the condition of the poorer classes, Mr. B. S. Rowntree read a paper at the British Medical Association Meeting, last August, on Poverty and Disease (*British Medical Journal*, 16th August, 1902). His observations refer to York, which has a population of about 75,000. In discussing the question he speaks of poverty under two heads, primary and secondary poverty. He defines "primary poverty" as the condition when the total earnings are insufficient to obtain the minimum necessities for the maintenance of physical efficiency in the family. "Secondary poverty" is when the earnings would be sufficient if some part of them were not wasted. He found that in York 10 per cent. of the total population were living in "primary poverty," and that of this 10 per cent. just one-half (52 per cent.) is due to the fact that the chief wage earner, though in regular employment, has wages which are insufficient to maintain a family of moderate size in a state of physical efficiency. 18 per cent. of the population were living in a state of "secondary poverty," so that, adding the two classes together, 28 per cent. of the population in York are living in poverty. Some years ago Mr. Charles Booth estimated that in London 30 per cent. of the people were living in poverty. If then the same conditions prevail in other large towns, it would appear that more than a quarter of our town populations are living at, or below, the poverty line. Now in England and Wales, at last year's census, 77 per cent. of the population was urban; namely, 25 millions out of 32½ millions; the town population having increased 15 per cent. during the last decade.

5. Every year a table is published, in the Army Medical Department Report, which classifies the recruits examined according to their previous occupations. The following is the table for 1900. It has not been selected for any special reason, but is given as an average example of our recruiting experience:—

Occupation of recruits.	Number inspected.	Number rejected.	Ratio rejected per 1,000 inspected.	Proportion of each group in 1,000 recruits inspected.
1. Labourers, servants, husbandmen, etc. -	52,022	15,025	288.82	616
2. Manufacturing artizans (cloth-workers, weavers, lace makers, etc.) - - -	11,971	3,478	290.54	142
3. Mechanics employed in occupations favourable to physical development (smiths, carpenters, masons, etc.) - -	11,201	2,923	260.96	133
4. Shopmen and clerks - - - -	5,950	1,826	306.89	70
5. Professional occupations, students, etc. -	827	220	266.02	10
6. Boys under 17 years of age - - -	2,431	273	112.30	29
TOTAL - - - - -	84,402	23,745	281.33	1,000

6. Examination of a series of these annual tables shows that the proportion of the different classes remains remarkably constant from year to year, and the figures indicate that the bulk of our soldiers are drawn from the unskilled labour class, and consequently from the stratum of the population living in actual poverty or close to the poverty line. As might be expected, the highest ratio of rejection is shown for men who have been following indoor occupations.

7. The impairment of vigour and physique among the urban poor is easy to understand when we reflect that, in addition to their only being able to provide themselves with food insufficient in quantity and probably poor in quality, their poverty also usually entails unhealthy environment, e.g., defective housing, overcrowding and insanitary surroundings. Add to this the distress resulting from such causes as want of thrift, illness or death of the breadwinner, and alcoholic excess. Further, the physical deterioration caused by inherited or acquired disease must not be forgotten, and in illustration we need only instance the part played in this way by tubercle and syphilis.

8. In his Annual Report for 1902, just issued, the Inspector-General for Recruiting remarks that the one subject

which causes anxiety in the future as regards recruiting is the gradual deterioration of the physique of the working classes from whom the bulk of the recruits must always be drawn, and, when it is remembered that recruiters are instructed not to submit for medical examination candidates for enlistment unless they are reasonably expected to be passed as fit, we cannot but be struck by the percentage considered by the medical officers as unfit for the service. In the reports from all the manufacturing districts, stress is invariably laid upon the number of men medically rejected for bad teeth, flat feet, and inferior physique.

9. Examining next the Army recruiting statistics in relation to the assertion that practically 60 per cent. of the men offering themselves for enlistment are unfit for military service, the following table has been compiled from information given in the Army Medical Department Reports, supplemented in some particulars by data obtained from the reports of the Inspector-General of Recruiting. A period of 10 years (1893-1902) has been selected, as of course, the greater the number of observations dealt with, the nearer will be our approximation to the truth.

Year-	1. Number of recruits inspected (A.M.D. Report.)	2. Number rejected on inspection. (A.M.D. Report.)	3. Number re- jected within 3 months after enlistment. (A.M.D. Report.)	4. Invalids discharged during the year under 2 years' ser- vice. (I.G.R. Report.)	5. Ratio per cent., column 2.	6. Ratio per cent., column 3.	7. Ratio per cent., column 4.
1893 - - - - -	64,110	25,999	342	962	40.6	0.5	1.5
1894 - - - - -	61,985	24,705	369	770	39.9	0.6	1.2
1895 - - - - -	55,698	22,548	368	952	40.5	0.7	1.7
1896 - - - - -	54,574	22,698	413	999	41.6	0.8	1.8
1897 - - - - -	59,986	22,370	575	997	37.3	1.0	1.7
1898 - - - - -	66,502	22,983*	387	983	34.6	0.6	1.5
1899 - - - - -	68,087	22,071	433	1,003	32.4	0.6	1.5
1900 - - - - -	84,402	23,105	640	1,514	27.4	0.8	1.8
1901 - - - - -	76,750	21,522*	1,014	3,825	28.0	1.3	4.9
1902 - - - - -	87,609	26,913*	1,308*	2,254	30.7	1.5	2.5
1893-1902 - - - - -	679,703	234,914	5,849	14,259	34.6	0.9	2.1

* Does not include men enlisted in 1902 and discharged under 3 months' service in 1903.

10. It will be observed that during this decennial period the number of men medically examined for enlistment was 679,703, and of those 234,914 were rejected as medically unfit for service, giving a rejection ratio of 34.6 per cent.; of the men passed fit, 5,849 broke down within three months after enlistment, being at the rate of 9 per cent. for this class; while 14,259, or 2.1 per cent. more, were discharged as invalids under two years' service. The smallness of the rate of the rejections within three months of enlistment, varying as will be observed, between .5 and 1.5 per cent. speaks well, I think, for the thoroughness of the primary medical examination of recruits. But the rejection of one out of every three men examined by the recruiting medical officer points clearly to the poorness of the human material available for army purposes, as a writer in the *Lancet* puts it. Adding together the rates for the three classes of rejections referred to in the table, we find that 37.6 per cent. of the 679,703 men examined during the decennial period proved to be unfit for military service. This percentage of rejections does not, however, represent the whole extent of the physical unfitness existing among men wishing to become soldiers, and offering themselves for enlistment. The Inspector-General of Recruiting states in his report for 1902, that it must be borne in mind, when examining these totals, that they do not represent anything like the total number of the rejections of candidates for enlistment into the Army. A large

number of men are rejected by recruiting sergeants and recruiting officers and such men in consequence are never medically inspected and do not appear in any returns. In the decennial period under consideration we have only been able to account for 37.6 per cent. of rejections from official statistics; but according to Sir Frederick Maurice's estimate, 60 per cent. of the men who offer themselves are unfit for service. This indicates that the number of men turned away by the recruiters themselves as unlikely to have any reasonable chance of passing the medical examination is an appallingly large one. As already stated no official record is kept of the number of men turned away; but there is reason to believe that the number is a large one, though whether it is sufficiently large to bring up the figures of the rejected to 60 per cent. we have no means of saying.

11. Examination of the statistics dealing with the causes of rejection by the examining medical officers of men seeking enlistment, brings into prominence the fact that the majority are rejected on account of causes indicating poor physical development, namely, under chest measurement, under height, and under weight. Defective vision may also be regarded in many cases as resulting from developmental defect. The following table gives the statistics relating to the principal causes of rejection for the twelve years 1891-1902:-

CAUSES of Rejection of Recruits on Inspection, with ratio per 1000.

1891-1902.

Cause of rejection.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Under chest measurement -	92.03	95.90	108.55	110.27	126.38	139.64	89.44	73.88	65.84	59.84	49.88	56.72
Defective vision - -	40.35	42.35	41.51	42.90	39.88	40.72	41.15	42.64	41.99	36.42	35.84	39.23
Under weight - - -	32.47	27.62	39.99	39.61	36.58	35.95	45.58	34.82	33.84	28.52	25.15	21.72
Under height - - -	26.76	32.71	33.24	28.67	28.72	28.77	24.86	21.79	20.21	15.18	13.56	11.59
Imperfect constitution and debility	18.40	9.87	9.47	5.00	3.57	4.44	4.45	5.49	5.82	4.94	3.36	3.91
Disease of veins - - -	16.39	16.24	17.11	15.84	15.85	15.72	15.42	15.74	14.22	11.69	13.98	12.30
Disease of heart - - -	16.06	13.87	17.74	19.62	20.71	18.76	17.67	17.26	15.69	13.15	16.74	17.33
Defects of lower extremities	15.57	17.09	14.40	17.44	18.16	18.14	18.12	17.72	13.98	10.53	10.35	12.27
Varicocele - - - -	12.93	11.85	12.85	14.25	12.28	13.07	13.07	12.29	12.16	11.21	13.89	12.59
Flat feet - - - -	11.04	9.83	12.45	14.71	13.16	17.81	16.79	12.24	12.31	9.02	11.66	12.44
Loss or decay of teeth - -	10.88	14.56	15.33	16.26	17.95	19.75	24.16	26.34	25.29	20.02	26.70	49.26

It will be observed that bad teeth and flat feet, causes of rejection to which considerable importance was attached in General Maurice's paper in the *Contemporary Review*, occupy a comparatively low place in the list. But with regard to loss or decay of teeth, it must be pointed out that the numbers rejected on this account during the past four or five years have shown steady increase, until this cause of rejection has come to regularly occupy a high place on the list. Whether the increase in the rejections for bad teeth is an indication of increasing prevalence of physical unfitness is open to question, the increase may partly, at least, be due to the more common use of articles of food which readily undergo acid fermentation, and partly also to examining medical officers having gradually come to place a high value on soundness of teeth as a matter of the greatest importance in its relation to the maintenance of the physical efficiency of the soldier on service. The main inference to be drawn from a consideration of the figures in the table is that the bulk of the rejections arise from causes indicating the operation of agencies antagonistic to healthy physical development.

12. It has already been stated that a large proportion of the population live in towns, and this has been estimated at 77 per cent., or 25,000,000. Of this town population about 25 per cent. (probably at least 6,000,000), appear from trustworthy investigations, to be not only poor, but living in actual poverty, so as to be unable to rear their children under conditions favourable to health and physical fitness. The bulk of the men who seek enlistment belong to this section of the population, and a very large proportion (but probably not quite three out of five as stated by General Maurice) of the men who wish to join the Army prove physically unfit for military service. It is not claimed that the same proportion of poor material will be found generally distributed amongst all classes of the community. In an earlier paper in the *Contemporary Review*, on "Where to get men," General Maurice remarks regarding this point, "Of course, as yet, that stern and brutal fact of the two in five does not mean that of the whole male population of the kingdom there are only two out of five who are fit to bear arms."

In the concluding paragraphs of his paper on "National Health: A Soldier's Study," Sir Frederick Maurice states:

"My object is to call upon the great profession, whose immediate concern is health, to give us the guidance and leading we need, and primarily it seems to me that we ought to call upon the Councils of the Colleges of Physicians and Surgeons, as *ex officio* the great national boards of health to help and guide us." I should suppose that they have not at this moment, despite the census, sufficiently comprehensive data on which to pronounce, but if that be so, no Government could or would wish to resist an appeal from them for assistance in getting at the truth on the tremendous question which has been raised by the investigations of Mr. Rowntree: "Is it or is it not true that the whole labouring population of the land are at present living under conditions which make it impossible that they should rear the next generation to be sufficiently virile to supply more than two out of five men effective for the purposes of either peace or war."

The question at issue constitutes a problem by no means easy to solve. Were all classes of the community able to provide their offspring with ample food and air space, a healthy race would be produced, and the proper material to fill the ranks of the Army would probably soon be obtained.

13. Information is wanted as to the causes of physical deficiency and as to the best available methods of remedying defects and improving the national health. Such an inquiry might fitly be undertaken by a commission as to the composition of which the advice of the Colleges of Physicians and Surgeons might be asked. As the matter is one of the utmost importance from the recruiting point of view, it is suggested that the Secretary of State might take the initiative in the matter of getting the opinion of the Councils of the Colleges with regard to—

- (a.) The necessity for such an inquiry.
- (b.) The ground to be covered by a commission if appointed.
- (c.) Composition of commission.

W. TAYLOR, Director-General,
Army Medical Service.

War Office,
2nd April, 1903.

(b) REPORTS TO THE HOME OFFICE BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

ROYAL COLLEGE OF PHYSICIANS.

REPORT OF THE COMMITTEE ON THE PHYSICAL DISABILITY OF ARMY RECRUITS.

14. Committee appointed by the College, July 2nd, 1903, to consider a communication from the Home Secretary, asking for observations on a proposed enquiry into the causes which have led to the rejection in recent years of so many recruits for the Army, on the ground of physical disability, and the possible measures by which this state of affairs may be remedied.

Members of the Committee.—The President, Dr. Poore, Dr. Longstaff, Dr. Pringle, Dr. Newsholme, Dr. J. F. W. Tatham.

In the original Memorandum, signed by Sir William Taylor, Director General of the Army Medical Department, sent to the College under cover of a letter from the Home Office, dated June 11th, 1903, the College was asked to express an opinion as to the necessity for an enquiry into the causes of the physical disability of so large a proportion of men offering themselves as recruits, and as to the available methods of remedying defects and improving the national health.

The general tenor of the report appeared to favour the opinion that an increasing deterioration in physique is taking place in the classes of the population from whom military recruits are chiefly drawn. An examination, however, of the figures given in the tables in the Memorandum itself does not support this view, as we find that the rejections of those offering themselves as recruits have fallen from 42 per cent. in 1891, to 34 per cent. in 1902. If we consider the causes of rejection, the table on page 4 of the Memorandum shows that chest measurements, weight, and height have all improved in recent years; whilst at the same time the rejections from other causes—with the exception of decayed teeth—have all decreased in number. Application was therefore made by the College to the Home Office for further information which might explain the apparent contradiction between the general tone of the report and the figures given. Information was especially asked for on such points as alterations in standard, if any, and more detailed statements as to the occupations of the heterogeneous class No. I ("labourers, servants, husbandmen, etc.") from whom nearly two-thirds of the number inspected were drawn, and who, therefore, furnish by far the largest number of rejections.

In reply to this application we were informed through Mr. Cunynghame, C.B., that the College was not asked to enter into an investigation of any alleged deterioration. What was wanted of the College, at this stage, was the expression of an opinion whether, from their point of view, an inquiry was necessary or not; and that they should confine themselves to answering the questions *a*, *b* and *c* at the end of the Director General's Report—

(*a*) The necessity for such an enquiry.

(*b*) The ground to be covered by a Commission if appointed.

(*c*) Composition of Commission.

15. The College is therefore placed in a position of expressing an opinion as to the necessity of an inquiry without any adequate data upon which an opinion can be founded.

Your Committee hold that it is extremely improbable that any general deterioration of the physique of the population is taking place, when they consider (without laying undue stress on the greatly lowered death-rate) how much the food, clothing and housing of the people have improved, together with the diminution of general pauperism. Class 1 (No. 1 of the Director General's statement) must include the *residuum* of the labour market; and, whilst your Committee duly recognise the effect which the increase of urban as compared with rural population may have on the population at large, it must be remembered that there has been a marked increase in the wage of agricultural labourers (a diminishing class) of late years, and that the attractions offered to this class by the Army in the shape of pay are proportionately much less than formerly, and consequently a larger proportion of men offering themselves for recruits may be expected to belong to the class of casual labourers in our large towns.

The Committee desire to draw attention to the fact that a greater change has taken place in the conditions of life in this country during the last fifty years than in any similar period of our history. Could an enquiry be made into the present physical condition of the nation, it is self-evident that it would be of great value, but one dealing with a portion only would be likely to lead to error.

The Committee would, therefore, suggest to the College that its answer to the Home Secretary's letter be as follows:—

Draft of reply to the Home Office.

16. The College has carefully considered the statement of the Director General of the Army Medical Service, forwarded through the Home Office, and would point out that the information furnished by it is not of such a character as to enable the College to express a decided opinion upon the question of whether there is, or is not, a necessity for an enquiry into the causes of the physical deficiency of those offering themselves as recruits for the Army.

The College is in possession of no means for comparing the condition of the population from whom recruits are drawn at the present time with that which obtained in former years. The figures given in the Director General's statement show that there has been no increase in the proportion of rejections, and although the numbers of those discharged from the Service in 1901-1902 are proportionately larger than those in former years, no details are given as to the circumstances under which the increase has taken place; and, indeed, the figures may not be strictly comparable.

17. Any investigation which does not take into account the condition of the labouring classes in the great industries of the country must necessarily give a very erroneous impression of the physique of these classes. The increase in the rate of wages in all forms of labour to that extent diminishes the attractions of a military career for those engaged in regular labour, and leads to a proportionately larger number of the "unemployed" offering themselves for service in the Army.

18. It is obvious that the casual labourers of the large towns represent the poorest portion of the population, among whom the lowest standard of physique would be found; but the College is not in possession of any evidence which satisfies it that there is any physical degeneration of the urban population generally. Moreover, the fact that the urban death-rate has declined between 5 and 6 per thousand, and now more closely approximates that of the rural population makes it unlikely that such deterioration is taking place.

19. The question of what means are available for remedying existing defects in and improving the national health may, perhaps, be briefly summed up as those which tend to diminish poverty. At the same time, the College desires to point out that very great changes in the conditions of life have taken place during the last fifty years, the effects of some of which are not yet determined. Among these should be considered the alterations in character of the food, the compulsory education and confinement in schools of young children, and the very great increase of female labour in towns. Could an enquiry be made into the present physical condition of the nation it is self-evident that it would be of great value; but one dealing with a portion only of the population would be likely to lead to error. Such an enquiry would naturally include the above subjects, the experiences of the Royal Navy, and other services of the State.

20. It hardly comes within the province of the College to state its views with regard to the composition of such a Commission as is suggested. If decided upon by the Government, it would be prepared, in conjunction with the Royal College of Surgeons of England, to suggest names, should it be thought desirable to place members of the medical profession on the Commission.

W. S. CHURCH,
President.

27th July, 1903.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

21. The Council of the Royal College of Surgeons of England have carefully considered the Circular drawn up by Sir William Taylor, Director General of the Army Medical Service, on the physical deficiencies of the men who offer themselves for enlistment in the Army; and now beg to submit, for the information of the Secretary of State, the following observations in reference to those matters upon which their opinion is invited, viz.:—(a) the necessity of a proposed enquiry into the causes of physical deficiency and as to the best available means of remedying defects and improving the national health; (b) the ground to be covered by the Commission if appointed; and (c) the composition of the Commission.

It is premised in the Circular of the Director General that, while there is reason to believe the physique of the well-to-do classes is improving, “a very large proportion of the men who offer themselves for enlistment in the Army are found to be physically unfit for military service;” and there seems to be a presumption that the proportion is increasing. But the statistics set forth in the Circular do not support this view; and there is no indication that the figures are affected by any change in the standard of physical requirements in recruits during the period under consideration. Nor does it appear that there has been any noticeable change in the personnel of the candidates for enlistment during this period. In the opinion of the Council, however, there are reasons for believing that, compared with former times, most of the men who now offer themselves as recruits are drawn from a class physically inferior, and that a general statistical statement may be, therefore, misleading.

22. Many influences have been at work during recent years to affect the status of the working classes. Increased competition in trade, keener industrial rivalries, the growing responsibilities of employers, the “labour movement,” trades-unions, and other social and economic factors have altered the conditions of labour, and raised at once the comparative standard of efficiency of the workman, the standard of living, and the rate of wages. In the struggle for employment the better educated, the more intelligent, and the more active and industrious are attracted to the better paid and more coveted occupations. The result is a large, and probably growing, remainder of those who, more or less unfit, fail to obtain regular employment. And it is apparently from this residue that the Army has to obtain the larger proportion of its recruits.

23. Disquieting though this reflection may be, there is no evidence before the Council that the physical disabilities of this class, taken by itself, has increased or are increasing. Indeed, the data supplied by the Circular itself seem to show that they have not increased, but rather that they may tend to diminish.

From Table I. p. 2, it would appear that when recruits belong to a class which may be regarded as first-hand material, namely, “boys under seventeen years of age,” the proportion of rejections is only 11·2 per cent. Considering the probable parentage and the early surroundings of these youths, and considering also the numerous possible physical disqualifications, this cannot be regarded as a high rate of rejection. Moreover, this class of recruit affords a fair criterion of the average physique of the lower stratum of society. And it is also this class of recruit which should manifest most improvement under the favouring conditions of better food, better housing, and better surroundings and associations after enlistment.

Again, Table II. p. 3 shows a steadily declining rate of primary rejections from 40·6 per cent. in 1893 and 41·6 per cent. in 1896 to 27·4, 28·0, and 30·7 respectively in the three years 1900–2. Against this is to be set a sharp rise in the years 1901 and 1902 in secondary rejections, that is, rejections within three months of enlistment and after two years’ service. The causes of these secondary rejections are not stated; but it may not unreasonably be assumed that many of them were due to preventable causes, physical or moral.

As bearing generally on the larger question of National Health, and more particularly on the physique of those who offer themselves as recruits, Table III. p. 4 is not

without some hopeful indications as to the future. The Table shows a diminishing proportion of rejections in each of the assigned grounds of disqualification, excepting that of “loss or decay of teeth.” In such a critical test of physique as “chest measurement,” the rejections which were 139·64 per thousand in 1896, were only 49·88 and 56·72 respectively in the years 1901–2. “Imperfect constitution and debility” caused 18·40 per thousand rejection in 1891, and only 3·36 and 3·91 respectively in the years 1901–2. On the other hand, the rejections due to loss or decay of teeth which were 10·88 per thousand in 1891, had risen to 49·26 per thousand in 1902.

The Circular does not state whether or not there has been increased stringency of late in the matter of the teeth, or relaxation with respect to the other physical and vital requirements. In the absence of any statement to the contrary, the Council assume that no material alteration has been made. In any case the Council believe that many of the causes of disability will tend to grow less. Greater attention is now paid in schools to the general health of children, to physical training, to the care of the sight, the hearing, and the cleanliness of the mouth and teeth. And the spreading influence of the various social, municipal, and philanthropic agencies for the promotion of the public health, and the strengthening of the character of the individual, cannot fail to beneficially affect the health and well-being of all classes of the people, including the lowest.

24. It may, perhaps, not be altogether irrelevant to remark that many of the grounds of physical disqualification for the English Army, such as defects in vision, weight, height, and teeth, would in countries where conscription obtains be much less important factors in judging of the fitness of men for military service.

The Council desire to state that while they have thought it right to scrutinize the data supplied in the Circular prepared by the Director General, they have not done so in a captious spirit, but rather to illustrate the difficulty they have experienced in forming an opinion or in making any definite recommendation. They cordially recognize the immense importance of the matters to which the Director General has called attention, and the skill and clearness with which he has collated the facts upon which his opinion and recommendations are based.

25. On the evidence before them, and in view of the testimony of the public health statistics, the Council do not think there is need for a large enquiry into the Nation’s Health, and they are doubtful whether trustworthy results would be obtained by instituting a special enquiry with respect to the class from which most of the recruits are obtained. The Council are, however, of opinion that much might be done in a less formal manner by emphasizing the necessity of still stricter attention to the health, feeding, and training of school children, and more especially the care of the teeth and the arrest of threatened or early decay.

26. The Council also are of opinion—upon which opinion they would lay great stress—that as much as possible should be done to promote the health, growth, and general physical development of the young soldier by improving his environment and by the exercise of special care in the selection of the kind and quality of his food and in its preparation and preservation.

Should the Government decide to institute the larger enquiry into the National Health, or the more limited one dealing chiefly or solely with the class supplying the majority of recruits, the Committee would suggest that in addition to military men, the Commission should contain employers of labour, representatives of the working-classes, persons who have specially studied matters relating to public health, and members of the medical profession. With respect to the last named, the Council would be pleased in conjunction with the Royal College of Physicians to nominate representatives specially acquainted with the subject-matter of the enquiry.

JOHN TWEEDY,
President.

4th August, 1903.

(c) LETTER TO THE WAR OFFICE FROM THE PHYSICAL DETERIORATION COMMITTEE.

October 26th, 1903.

SIR,—

Physical Deterioration Committee.

27. The Committee which was appointed on September 2nd, by the Duke of Devonshire at that date Lord President of the Council, to enquire into the allegations concerning the physical deterioration of certain classes of the population, held its first meeting on the 21st inst., when the Memorandum of the Director General, Army Medical Service, dated April 2nd, 1903, was under consideration.

If reference is made to the Table on page 6 of the Memorandum, it appears that chest measurement, weight and height have all improved in recent years, whilst at the same time the rejections from other causes—with the exception of decayed teeth—have for the most part decreased in number, and the Committee would therefore be glad of any further information that would tend to explain the disquieting tone of the Memorandum, as a whole. It was also decided to ask you to be so good as to furnish the Committee with any information in the

possession of the Department that throws light upon the figures included in head No. 1 of the Table on page 4 of the Memorandum. That head comprises “labourers, servants, husbandmen, etc.” and from these classes by far the largest number of recruits are drawn. The Committee would be glad to know what sub-divisions, with the figures attaching to each, are included, and, if possible, what classes of men are employed and what occupations are meant by the terms “labourers, servants, husbandmen, etc.” and it would be of great additional assistance if the tables so expanded could be arranged with the object of showing the local distribution of the conclusions deducible from them.

The Committee are desirous of obtaining as many statistics and records as possible bearing upon the existing state of facts, and will feel obliged for any help you could give in the matter.—I am, Sir, your obedient servant,

ALMERIC W. FITZ ROY.

The Under Secretary of State,
War Office.

(d.) FURTHER MEMORANDUM OF THE DIRECTOR-GENERAL, ARMY MEDICAL SERVICE.

28. IN reference to a letter dated 26th October, 1903, from the Chairman of the Committee appointed by the Lord President of the Council to inquire into the question regarding the defective physique of certain classes of the population of the United Kingdom, I think I ought to explain that an earlier statement could not be sent on account of the time taken up in obtaining the necessary information from different recruiting centres and the large amount of work involved in the preparation of the accompanying statistical tables.

Before touching on these tables, there are one or two points of great importance in relation to this inquiry about which I would like to say a few words with a view to bring to notice what I conceive to be a grave misunderstanding as to the main question at issue. In the first place, I think that the idea of “progressive physical deterioration” has occupied a much too prominent position in the minds of those who have had to consider and report as to the advisability of inquiry being necessary, and I also regret that the words “physical deterioration” have been adopted in the designation which has been given to the Committee. I consider that it is impossible to obtain reliable statistical or other data regarding the conditions that have existed in the past, and consequently, as no reliable data are obtainable for purposes of comparison, I don’t see how the question can be dealt with from the progressive deterioration point of view. Whether or not there has been, or is, progressive physical deterioration among the classes now in question is a matter of very great importance, no doubt, but, in my opinion, it is not the chief question from a practical standpoint. To my mind the principal question for the Committee is to inquire into the causes and present extent of the physical *unfitness* that undoubtedly exists in large degree among certain classes of the population. The question dealt with in my original Memorandum was not that there was evidence of progressive physical deterioration of the race, either in whole or in part, but that it is a most disturbing fact that from 40 to 60 per cent. of the men who present themselves for enlistment are found to be physically unfit for military service. Even if the proportion is no greater than in the past, surely it is a state of matters worthy of the closest investigation, and one which no thinking man can wish to see continue. Moreover, it would be out of keeping with the progressive spirit of the times we live in for us to be content with the consolation that we are no worse off than we were fifty or even twenty years ago. I trust that the inquiry may end in suggestions that will lead to the institution of measures which will result in bringing about a marked improvement of the physique of the classes from which our recruits are at present drawn. I would again take this opportunity of pointing out that the smallness of the rate of the rejections within three months of enlistment, varying, as will be observed from the table on page 3 of my first Memorandum between .5 and 1.5 per cent. speaks well, I think, for the

carefulness of the primary medical examination of recruits; while the rejection of one out of even every three men examined by the recruiting medical officer points clearly to the poorness of the human material available for Army purposes.

Secondly, I would like that the objects with which the tables given on pages 3 and 4 of the Memorandum were prepared should be clearly understood. The table on page 3 was compiled for the purpose of comparing the evidence given by Army Recruiting Statistics with Sir Frederick Maurice’s assertion that 60 per cent. of the men offering themselves for enlistment are unfit for military service. The table on page 4 was prepared in order to show the principal causes of rejection, and it is stated in the Memorandum that the main inference to be drawn from a consideration of the figures in the table is that the bulk of the rejections arise from causes indicating the operation of agencies antagonistic to healthy physical development. These explanations are given, as there appears to be an impression abroad that these tables were inserted in order to in some way lend support to the view that an increasing deterioration in physique is taking place in the classes of the population from whom military recruits are chiefly drawn.

The figures in the tables referred to in the preceding paragraph cannot be taken as either telling for or against increasing deterioration. The apparent improvement which the figures show since 1896, as regards chest measurement, weight, and height, and also as regards some of the other causes of rejection, must be considered in conjunction with the statement made near the bottom of page 3 of the Memorandum: “That it must be borne in mind, when examining these totals, that they do not represent anything like the *total* number of the rejections of candidates for enlistment into the Army. A large number of men are rejected by recruiting sergeants and recruiting officers, and such men in consequence are never medically inspected and do not appear in and returns.” The Inspector-General of Recruiting issued these instructions in order to lessen the work of medical officers engaged on recruiting duties. Recruiters had strict orders not to send any recruit before an examining medical officer unless they considered that the man had a reasonable chance of passing. The Inspector-General of Recruiting has stated to me in regard to this point: “My recruiters not being medical men. I cannot check rejections for ‘various ailments,’ but I can for ‘want of physical development,’ by having all weeds immediately thrown out and not sent up for medical examination.” This radical change in procedure was made on account of the large number of rejections for “under chest measurement,” observed up to 1896, and as the change dates from that time, I regret to say that the improvement in the figures since observed cannot be regarded as indicating an all-round improvement in physique on the part of the men presenting themselves for enlistment.

The following statistical tables, which bear on the *App* existing state of facts, are herewith forwarded:—

Table 1.—Return of recruits rejected on inspection at St. George's Barracks, London, Hounslow, Woolwich, Newcastle on Tyne, Manchester, Liverpool, Birmingham, Lichfield, Edinburgh, Glasgow, Dublin, and Belfast, during 1901 and 1902, showing causes of rejection according to previous occupations.

Table 2.—Return of recruits rejected on inspection during 1901, at the same recruiting stations, showing causes of rejection according to previous occupations, arranged by stations.

Table 3.—Return of recruits rejected on inspection during 1902, at the same recruiting stations, showing causes of rejection according to previous occupations arranged by stations.

(e) LETTERS TO THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS FROM THE PHYSICAL DETERIORATION COMMITTEE.

December 1st, 1903.

SIR,—

Physical Deterioration Committee.

29. The above Committee have had under consideration the Memorandum of the Director-General, Army Medical Service, dated April the 2nd, 1903, and the Reports of the Royal Colleges of Physicians and Surgeons consequent thereon. They have communicated with the War Office on the difficulty of reconciling the general views expressed in the Memorandum with the actual results that appear from the figures contained therein, and have received in answer a further memorandum from the Director-General together with four tables of figures giving more detailed statistics as to the percentage of recruits rejected and the causes of rejection. Copies of this Memorandum and tables are enclosed herewith.

The Committee will be glad if the Royal College of Physicians will take these documents into consideration and while favouring the Committee with any observations it is desired to make, will be careful to state whether the perusal of the supplementary matter now furnished suggests the modification in any degree of the opinions previously expressed on the subject.—I am, Sir,

Your obedient Servant,

A. W. FITZ ROY.

The President,
The Royal College of Physicians,
Pall Mall East, S.W.

(f) REPLIES FROM THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

Royal College of Physicians,
London, S.W.
30th January, 1904.

SIR,—

Physical Deterioration of Army Recruits.

31. I am at length able to reply on behalf of this college to your letter of December 1st, 1903, enclosing a further Memorandum from the Director-General and four additional statistical tables on the above subject, and asking to be informed if the opinions previously expressed by the college are in any way modified by a perusal of this supplementary matter.

The communication was submitted in December to the same Select Committee as the previous one on this subject, received through the Home Secretary in June last, had been, and their Report was received and considered at a general meeting of the college on the 28th instant.

From the new memorandum, it appears that the college somewhat misunderstood the question which it was intended to place before them on the first occasion. The general tenor of the first Memorandum suggested that the existence of a progressive physical deterioration was the most important portion of that question, and their answer was framed under this impression.

32. Having now carefully considered the further document supplied to them, the College are of opinion that an enquiry into the present extent and causes of the alleged physical disability for military service of certain classes of the population is desirable.

Table 4.—Principal causes of rejection, tabulated according to previous occupations.

The heading "Want of Physical Development," includes the following, which are shown separately in the other tables.

- Impaired constitution and debility.
- Under height.
- Under chest measurement.
- Under weight.
- Not likely to become an efficient soldier.

W. TAYLOR,
Director-General.

War Office,
November, 1903.

December 1st, 1903.

SIR,—

Physical Deterioration Committee.

30. The above Committee have had under consideration the Memorandum of the Director-General, Army Medical Service, dated April the 2nd, 1903, and the Reports of the Royal Colleges of Physicians and Surgeons consequent thereon. They have communicated with the War Office on the difficulty of reconciling the general views expressed in the Memorandum with the actual results that appear from the figures contained therein, and have received in answer a further Memorandum from the Director-General together with four tables of figures giving more detailed statistics as to the percentage of recruits rejected and the causes of rejection. Copies of this Memorandum and tables are enclosed herewith.

The Committee will be glad if the Royal College of Surgeons will take these documents into consideration, and while favouring the Committee with any observations it is desired to make, will be careful to state whether the perusal of the supplementary matter now furnished suggests the modification in any degree of the opinions previously expressed on the subject.—I am, Sir,

Your obedient Servant,

A. W. FITZROY.

The President,
The Royal College of Surgeons,
40, Lincoln's Inn Fields, W.C.

A. W. Fitz Roy, Esq.

In their former reply the College considered that sufficient data were not available for forming a judgment on the extremely complex question of the occurrence or not of progressive degeneration in the classes from which recruits are mainly drawn, and the supplementary matter now brought before them does not suggest any modification of their former opinion.—I am, Sir,

Your obedient Servant,
EDWARD LIVEING, M.D.,
Registrar.

Royal College of Surgeons of England,
Lincoln's Inn Fields, London, W.C.

22nd December, 1903.

33. SIR,—With reference to your letter of the 1st instant, forwarding a copy of a further Memorandum prepared by the Director-General of the Army Medical Service, together with four tables of figures giving more detailed statistics as to the percentage of rejection of those who have offered themselves as recruits, and as to the causes of the rejections, the Council of the Royal College of Surgeons beg to make the following observations:—

The Council note that the Director-General thinks "that the idea of 'progressive physical deterioration' has occupied a much too prominent position in the minds of those who have had to consider and report as to the advisability of inquiry being necessary," and they also note the statement that the intention of his original Memorandum

was to call attention to "the most disturbing fact that from 40 to 60 per cent. of the men who present themselves for enlistment are found to be physically unfit for military service," and not to suggest there was evidence of a "progressive physical deterioration of the race," concerning which there are no trustworthy "statistical or other data."

With reference to these remarks of the Director-General, the Council desire to point out that in their Report to the Home Office they did not use the phrase "progressive physical deterioration," though some of their criticisms did assume that the first Memorandum of the Director-General seemed to suggest the idea of progressive physical deterioration among certain classes of the community.

While, therefore, the Council may not in every respect have interpreted quite accurately all the meaning and import of the Director-General's first Memorandum, their opinion was in no sense based upon a misunderstanding as to the main question at issue; and they are entirely in accord with the Director-General in believing that the two principal matters now to be considered are, first, an inquiry into the causes and present extent of the physical unfitness for military service that exists in

a large degree among certain classes of the population; and, second, the institution of measures which may bring about an improvement of the physique of the classes from which most of the recruits are at present drawn.

The Council believe that, in addition to any other means which may commend themselves to your Committee, the adoption of the precautions and supervisions indicated in the Council's previous Report would contribute not a little to the physical and moral improvement and well-being of the classes concerned.

In conclusion, the Council beg to state that, after a careful perusal of the supplementary information now supplied, they see no ground to modify the opinions which they have previously expressed upon the subject of the physical disability of many who offer themselves as recruits.—I am, Sir,

Your obedient Servant,

JOHN TWEEDY,
President.

A. W. Fitz Roy, Esq.,
Privy Council Office,
London, S.W.

APPENDIX II.

SCHEME FOR ANTHROPOMETRIC SURVEY OF UNITED KINGDOM.

1. The following table shows the statistics of population, schools and scholars:—

	Population (1901).	No. of Schools (primary).	No. on Register.	Scholars per cent. of Population.
England - - -	32,527,843	20,153	5,881,278	18
Scotland - - -	4,472,103	3,145	768,598	17·2
Ireland - - -	4,458,775	8,712	737,086	16·5
	41,458,721	32,010	7,386,962	M 17·2

The United Kingdom would be divided into 400 districts each containing on an average 100,000 persons. In thinly populated rural districts the number may be smaller, and in large towns the number may be greater.

In each of these districts 18,500 persons are in the primary schools, and 81,500 are adults or very young children. Let us say 80,000 adults are available for measurement in each district.

Let us suppose that a sample of 2,000 adults is measured in each district; the total number of adults to be measured will be $400 \times 2,000 = 800,000$.

In the case of school children we must measure a sample of 1,000–2,000 for each age interval of twelve months.

The total number of school children in each district is $\frac{7,386,962}{400} = 18,467$. Dividing this number into twelve age groups each of one year, each group will contain 1,539. This number is only just a sufficient sample. Hence, it follows that it will be necessary to measure the whole of the children in the primary schools. There are also a number of children in addition to this in the secondary schools.

Approximately it will be necessary to measure 800,000 adults, and 8,000,000 school children.

Each district should be measured once in ten years. In order to keep the staff constantly employed the measuring of the whole population may be spread over the whole ten year period. It will be necessary, therefore, to measure per annum, 80,000 adults and 800,000 school children, i.e., forty districts.

Taking 250 working days per annum, it will be necessary to measure 320 adults per day, and 3,200 school children per day.

If we have a staff of twenty surveyors it will be necessary that each surveyor measures 16 adults and 160 school children per day.

This, we think, allowing for unavoidable delays in getting at the persons to be measured, is a reasonable amount of work to expect from one surveyor per day.

QUALIFICATIONS AND DUTIES OF THE OFFICIALS OF THE PERMANENT STAFF.

2. The formation of a National Bureau would involve the establishment of:—

I. A Consultative Committee.

II. A Central Bureau.

III. Surveyors or Measurers.

The CONSULTATIVE COMMITTEE to consist of three leading Anthropologists who have devoted special attention to Anthropometry; one residing in England, one in Scotland, and one in Ireland. The appointments to be honorary, without salary.

THE BUREAU to be under the direction of a DIRECTOR and a DEPUTY-DIRECTOR. A statistical department would also require to be organised.

The SURVEYORS must be accurate and reliable manipulators, capable of being taught by the instructors to make the necessary anthropometric measurements. Their duties will be to go to districts as directed by the chief surveyor, and to carry out measurements as he directs. A certain number of the surveyors should be ladies, to measure school girls and female adults.

ESTIMATE FOR SCHEME IN WHICH THE SCHOOL TEACHERS ARE EMPLOYED TO MEASURE THE SCHOOL CHILDREN.

3. There are approximately 32,000 primary schools in

the United Kingdom, with an average of 230 scholars in each. 3,200 of these schools must be measured per annum, if the survey is spread over ten years. A surveyor working eight hours a day measures (as stated above) 160 children; a teacher working at the same rate would measure in one day, working one hour per day, 20 scholars; and would take twelve days to measure the average school.

Taking twenty fortnights per annum as available (when holidays are excluded), one set of instruments passed from one teacher to another would measure twenty schools per annum. To allow for delays in transmission of instruments, etc., let us say sixteen schools per annum would be measured by one set of instruments.

Now it is necessary to measure 3,200 schools per annum to complete the survey in ten years.

Therefore $\frac{3,200}{16} = 200$ sets of instruments would be required.

The cost of 200 sets of instruments at £8 a set is £1,600.

Each teacher will expect to be paid a gratuity of, say, £1 for measuring his school.

This will amount to £3,200 per annum. In order to train the teachers they will require to go for instruction to London, Edinburgh, or Dublin. Taking 100 miles as the average distance from the capitals, the average return fare at 1d. per mile will be 200d. = 16s. 8d.

For the 3,200 teachers per annum the travelling expenses will be £2,666 13s.

It will be necessary to pay on an average £1 for hotel expenses to each teacher. This will amount to £3,200

On the other hand, if the teachers measure the children, sixteen of the special surveyors might be dispensed with and £4,800 saved.

4. COMPARISON OF COST OF PERMANENT STAFF OF SURVEYORS AND OF THE EMPLOYMENT OF SCHOOL TEACHERS.

Special Staff.	School Teachers.
Cost of instruments £160.	Do. £1,600.
Annual Expenditure.	
Salaries of 16 permanent surveyors required to replace the teachers @ £300 - - - - -	£4,800
Balance in favour of permanent Staff - - - - -	£4,266
	<hr/>
	£9,066
Gratuity to teachers - - - - -	£3,200
Travelling expenses - - - - -	2,666
Hotel expenses - - - - -	3,200
	<hr/>
	£9,066

By employing a permanent staff of surveyors instead of the school teachers, there will be a saving of £1,440 in first cost of instruments, and of £4,266 in annual expenditure.

Permanent surveyors being constantly employed at the same work, and frequently tested by instructors, would measure very much more accurately than the teachers.

The objections which apply to teachers would apply in a less degree to factory inspectors, if these men in the course of their ordinary duties come frequently to London, Edinburgh, and Dublin. The cost of instructing them would thus be materially reduced. But owing to the fact that only part of their time could be devoted to

measurement, more sets of instruments would be required, and their skill would be inferior to that of permanent surveyors.

The above estimate, though only approximate, shows clearly, we think, that the employment of a specially trained permanent staff of surveyors to carry out the whole anthropometric survey, instead of employing teachers, factory inspectors, or other existing officials, will be much more economical and much more efficient.

Dated 7th January, 1904.

D. J. CUNNINGHAM.
JOHN GRAY.

APPENDIX III.

SOME RECENT INVESTIGATIONS AS TO THE NUMBER OF THE "POOR" IN THE COMMUNITY.

By Mr. C. S. Loch.

1. There are two counts of the "poor" which have attracted much attention and which, in my opinion, require more close study than they have received, if their real nature and limitations are to be understood. The counts to which I refer are those made by Mr. Charles Booth in regard first to the East of London and Hackney, and then to the whole Metropolis, and those made by Mr. Seebom Rowntree in regard to York.

It is not possible to ascertain the limitations of those counts and the qualifications which must be borne in mind in making use of them without a very attentive regard to the text which accompanies the figures and tables. The figures and the text must, so to speak, be read together as one expression, a not very easy task in any case and a task quite beyond the energy or perhaps indeed the ability of the general reader who is not specially interested or well versed in the details which underlie the calculations. Consequently such readers, if they are desirous of arriving at their conclusions quickly and by way of reference rather than slowly, and by the difficult process of accurate and proven data, seize the figures and forget the text. The text thus becomes little better than a footnote left unread or hastily skimmed, though in fact, if the conclusions are to be tested, it is even more important than the figures.

Such a result cannot but appear serious to those who are dealing personally with questions of social life and habit, and are anxious that the people at large should take a sane and accurate view of social conditions. Above all is it necessary in estimating the improvement or deterioration of the national life, during the past generation, to analyse these counts and classifications of the population—if their evidence is to be admitted as having any exceptional validity.

I have used the word "counts" in the above paragraph. In fact the calculations in these books are only in part counts. To a very large extent they are estimates.

2. To ascertain the nature of these counts and estimates the following points have to be considered : (1) the general method ; (2) the methods of collecting the particulars on which the classification is based ; (3) the classes—the utilisation of these particulars in forming the estimates and conclusions which are submitted, and (4) the conclusions and recommendations themselves.

I begin with Mr. Charles Booth's book on the "Life and Labour of the People."

"Life and Labour of the People."

THE GENERAL METHOD.

3. Mr. Charles Booth states his object to be : "To show the numerical relation which poverty, misery and depravity bear to regular earnings and comparative comfort, and to describe the general conditions under which each class lives." "I have throughout leaned to the safe side," he says, "preferring to paint things too dark rather than too bright."*

He aims at giving a picture, partly verbal and descriptive, partly statistical. He counts and estimates the people as they are as nearly as may be, at a precise moment, as if he were reporter and photographer combined. He makes no comparison between past and present. He collects no data for such a comparison, nor are his conclusions based on any observation of the changes in the development of the people, their present with their past, numerically or otherwise. He thus passes by all questions of progress or decadence, for in regard to them the comparative method is necessary. He works on a flat surface, so to speak; he cannot measure past and present or account for the present by the past, he can only measure quantities as they appear side by side on a certain date and from that comparison can only presume the conclusions.

Now this is obviously in itself a very misleading method. Without the ascertainment of causes, conclusions cannot rightly be drawn ; and causes do not lie on the flat surface, the momentary view of things. They can be ascertained only by the observance of their growth. In this method the observation of growth or development is wanting. Hence it does not supply the data which are necessary if any conclusions are to be drawn.

4. Perhaps I may be allowed to give an instance of this in reference to the statistical side of the question, though the principle affects the descriptive as much as the statistical elements of the method.

Mr. Charles Booth, the late Dr. Hunter, and some other writers adopted the method to which I refer in the controversies as to Poor Law relief some ten or twelve years ago. Each took a particular date and argued from the number and proportion of in and out paupers in unions grouped together in various ways. The instances of the fallacy are perhaps more striking in Dr. Hunter's paper ("Outdoor relief—is it so very bad?" *Contemporary Review*: March, 1894) than in some of the other documents. I will therefore refer to it more particularly.

Dr. Hunter, like Mr. Booth, took one particular date—that of Mr. Ritchie's return "Poor Law (Indoor and Outdoor Relief)" No. 265, 1 Jan., 1892. He grouped the poor law unions according to their population and in other ways. The unions thus grouped he arranged in two sub-groups or sections—one which he called "outdoor relief unions" and another which he called "indoor relief unions." To form these sections (1) he calculated the percentage of outdoor paupers to total paupers in each union of the group ; (2) he calculated the mean of these several percentages ; (3) he classed as an "outdoor relief union" and placed in that section each union in which the percentage of outdoor paupers to total paupers was more than this mean ; (4) he classed as an "indoor relief union" and placed in that section each union in which the percentage of outdoor paupers to total paupers was less than this mean.

Thus to take an instance :

Group : *Unions in Lancashire.*

Mean of percentages of outdoor to total paupers in the general Lancashire unions* (as above) 66·9.

Section "Out-door Unions."

Rochdale (and others—with percentage of out-door paupers to total paupers in excess of the mean) 70·4.

Section "In-door Unions."

West Derby (and others—with percentage of outdoor paupers to total paupers less than the mean) 56·7.

From figures thus compiled—with unions arranged in groups and the groups in turn compared with other groups, he drew various conclusions. Amongst others for instance that "the policy of indoor relief drives into the house." This was an inference assumed from the fact that according to his arrangement of unions there appeared at a particular date in a group or groups a larger number of paupers in the section of "indoor" unions than in the section of "outdoor" unions.

But from this momentary view of pauperism no such inference could be drawn.

First of all, the policy of Boards of Guardians is not so clear and settled that they can be placed in sections on the basis of outdoor to total paupers. Unions both below and above the mean are working usually by haphazard decisions and with no determinate policy at all. So far as such a policy is concerned, it is a mere chance whether they come above or below the line of the mean.

Next when a Board has a definite and declared policy, the inference that indoor relief drives into the house is

* "Life and Labour of the People" I. pp. 5 and 6 (First Edition).

* No detailed calculations appear in Dr. Hunter's paper. The above figures are worked out on his method and to explain it.

falsified, not by the figures of the moment which afford no basis for judgment one way or the other, but by the test of the comparative method.

Take, for instance, the case of a union which is classed "indoor." It is not mentioned by Dr. Hunter by name, but it is included in his groupings. Thirty years before the particular date the paupers numbered 1,019—in two groups—one indoor of 107, one outdoor of 912, and the policy of the guardians had been to reduce outdoor relief. Then in the course of the thirty years many recipients of outdoor relief grew old and died, and in accordance with the policy of the guardians their places were taken by very few new recipients. A few of the old recipients went into the workhouse or infirmary as age and helplessness came on them, and also a few others were admitted to these institutions. Then at the particular date the figures stood thus: 100 paupers in all instead of 1,019; of these sixty-nine in receipt of indoor relief instead of 107 and thirty-one in receipt of outdoor relief instead of 912.

Thus the fact as noted on the particular date in this (and in other instances) was taken as indicating a policy and the conclusion to be drawn from that policy. The fact indeed was taken as equivalent to the cause; because on the particular date there were more indoor than outdoor paupers; therefore indoor relief drives into the house. But the fact is itself a resultant of causes which have previously been at work and which only an analysis of previous facts and conditions can indicate. Isolated from them it has no real meaning. To affirm that to be a cause which is only a statement of fact, as disclosed on a particular date, is really to assume the cause, not to ascertain it—to assume the cause without having collected, analysed, or considered the evidence which would show what the cause or causes were.

In this (and in other instances) on the application of the comparative method it is evident that the inference from the figures of the particular date is quite incorrect. The paupers have not been driven into the house but the result has been quite the reverse.

A generation which began with 1,019 paupers concludes at thirty years later with 100; and the potential pauperism is reduced to that extent. The paupers who, on another policy of administration, would have taken the place of the (1,019—100) 919, are not driven into the house, but into the world of self-support.

Mr. Charles Booth's book on Pauperism is full of instances of conclusions of many kinds drawn from one day counts of paupers "in" and "out" in relation to population, and they are, as can be shown again and again, quite fallacious for the reasons given above.

In the "Life and Labour of the People" the method, so far as the statistics are concerned, is the same—though only to a small extent, comparatively, are problems of pauperism there treated. But so far as figures are given of the "poor" and "very poor" etc., it should be remembered that, putting aside for the moment other points in the method, no conclusions can be drawn from the figures themselves. No one can conclude from them in any way whether the people are more or less independent, or more or less poor. They throw no light on the relative condition of the people, and thus Mr. Booth's object "to show the numerical relation which poverty, misery, and depravity bear to regular earnings and comparative comfort" remains unachieved. In the classes A,B,C,D, there is poverty and clearly to some extent misery, using that word to mean extreme poverty, as presumably in A and B, but depravity as a cause of poverty is like other causes necessarily omitted everywhere from the enumeration. Nor is "the relation between poverty, depravity and regular earnings" worked out. His classes "C intermittent earnings" and "D small regular income" are separated only to be merged altogether and finally; so that the distinction of "regular earnings" itself disappears, just at the point where its influence on social habit should be most carefully observed. On the non-comparative one-day method of count and estimate this could hardly be otherwise.

THE METHOD OF COLLECTING THE PARTICULARS.

6. Information has been obtained from School Board visitors. Of the total area dealt with part is called "tested." The tested area covered "fully one-half" or "from one half to two thirds" of the whole population.

The whole area consists of seven districts, Shoreditch, Bethnal Green, Whitechapel, St. George's, Stepney, Mile End, Poplar and Hackney. The population consists of 891,539 persons. The figures in regard to the non-tested

part of this area are arrived at by a proportion as against the figures in the tested part. The latter thus becomes the gauge and standard of comparison. It is not stated however, what is the area or areas of this tested part, or what streets or families make it up. From that point of view the validity of the proportion cannot be checked by the text.

7. The School Board visitors gave particulars of the heads of families with school children. Of these particulars samples are furnished in the specimen streets. "Every house and every family with children is noted with such information as the visitors could give about them. Here are specimens of each class of street" ²¹ I., p. 7.

8. The heads of families with school children are scheduled by sections according to employment; and then it is assumed that all male adults in the area, (*i.e.* apparently those in the same district) who are not in the schedule follow the same employments as those of the men, who have been scheduled, in the same numerical proportion. Thus, if there are, say, thirty in the "dresss and food" trades section among the scheduled male adults (*i.e.* those with children at school), it is taken for granted, there is a proportional number of male adults engaged in "dress and food" trades among non-scheduled male adults ²² I., p. 4.

9. The adult males whose employment is unknown are thus allocated to employment sections proportionally according to the employments of those adult males whose employment is known. The children not of school age have them to be dealt with on similar lines. The elder children (thirteen to twenty) are assumed to belong proportionally to the several employment sections, the totals of which have been themselves settled by proportion. Thus supposing that in a district the tested families, the families with children attending school, say about half of the whole number, produce 100 railway servants, the other, the untested adult males without children attending school, are taken as producing another 100 railway servants, and then the children and young persons who are in the district according to the census are placed out, section by section, so many to our 200 railway servants, so many to each of the other sections.

10. The relative "poverty" of the section (*i.e.* the section by employment) is thus partly settled by the scheduled cases—the cases of the adult males in the employment-section who have children at school. But it is also settled in great degree by proportional calculations and assumptions. Thus, if in the district there are, say, 100 railway servants, scheduled as fifty in B, and fifty in C, all men with children attending school, it is taken for granted that there are among the un-scheduled populations, as the census returns of occupations may suggest, say another fifty B's and fifty C's railway servants, whose circumstances are not known; and though these at the time are at least not maintaining children of school age, or indeed may not have had any children at all, they have to be counted as poor as their brethren, and must for their sake, therefore, be themselves also consigned to B. and C.

11. According to the assumptions that underlie these proportional calculations the "non-tested area" has been scheduled "by other means or in proportion," for "as is the condition of the tested part so is the condition of the whole population." ²³ I., p. 5.

12. The speculative nature of the method is obvious. It is not stated what is the area "of the tested part"—or what are the areas in the different districts which taken together make up "the tested part;" the quantitative distribution of the classes of poverty and the sections of employment is assumed. This is an extremely hazardous assumption, unless the similarity of the population class by class and section by section in different parts of the area is tested and "agreed."

But of this no evidence is given.

13. To complete the population "it was necessary to add 68,451 adult women." These are "distributed amongst the classes in the proportions shown for the rest of the population to which they stand in the relation of sisters or daughters." "It may be doubted whether class B should contain its full proportion of these women or of girls from thirteen to twenty." This remark shows the very speculative nature of the process. The number of adult women added to Class B is 7,799, ²³ in a total of ²³ Table IV. 100,062.

14. Many of the phrases which are used show how difficult it is to check the figures and to give them any real statistical value.* The known and, so to speak, counted families may be placed in the several classes rightly or wrongly. But in addition, to account for the whole population many adjustments have to be made "by other means or in proportion."

But even so, it may be doubted if Class B has its right number of girls and women; and other similar cases of unsettled approximation to the figure ultimately entered will be found later on.

15. Though the classes are selected by the rule of "poverty," etc., judging from the published schedules of cases, wages are not entered in them, nor do wages appear to have been verified in the individual cases; nor are statements of rental or ages supplied. Nor is the number of children above school age or working away from the home noted—though their payments are often a very important item in the family budget. All these are indispensable details.

THE CLASSES.

16. The classes into which Mr. Booth divides the population are—

¹ I., p. 37.
² I., p. 38.
³ I., p. 39.
" A. The lowest class, which consists of some occasional labourers, street sellers, criminals, and semi-criminals.² Their life is the life of savages with vicissitudes of extreme and occasional excess. Their food is of the coarsest description; and their only luxury is drink.³ This class is now hereditary 'to a very considerable extent.'³ At the same time it is recruited with adult men from all others, and the number of children left in charge of it are 'proportionately small' and the number of young persons is proportionately large."⁴

⁴ I., p. 43.
⁵ I., p. 44.
⁶ I., p. 43.
⁷ I., p. 44.
⁸ I., p. 46.
⁹ I., p. 48.
¹⁰ I., p. 49.
¹¹ I., p. 51.

B.—Class B is "very poor"—"casual earnings, very poor." "The labourers of Class B do not, on the average, get as much as three days' work a week, but it is doubtful if many of them could, or would, work full time and for long together, if they had the opportunity."⁵ "Class B, and especially the 'labour' part of it is, not one in which men are born and live and die, so much as a deposit of those who from mental, moral, and physical causes are incapable of better work."⁶ "From whatever section Class B is drawn, except among the sections of poor women, there will be found many of them who from shiftlessness, helplessness, idleness, or drink are inevitably poor."⁷

C.—Class C, "intermittent earnings poor." "Those who work by the job, who are in and out of work according to the season or nature of their work⁸ are more than any others the victims of competition: on them falls with particular severity the weight of recurrent depressions of trade." There is a passion for drink "among some of the highly paid irregular workers."⁹

The employment section "irregular" in C and D taken together "has a very bad character for improvidence."¹⁰

D. "Small regular earnings, poor." "It must not be understood that all of these have quite regular work; but only that the earnings are constant enough to be treated as a regular income, which is not the case with the earnings of C."¹¹ "Of the whole section none can be said to rise above poverty, unless by the earnings of the children, nor are many to be classed as very poor. What they have comes in regularly, and except in times of sickness in the family, actual want rarely presses, unless the wife drinks." As a general rule, these men have a hard struggle to make the ends meet, but they are, as a body, decent steady men, paying their way and bringing up their children respectably. The work they do demands little skill or intelligence."¹²

The other classes are E regular standard wages. "As a rule the wives do not work, but the children all do." "This class owns a good deal of property in the aggregate."¹² F. "Higher class labour." G. "Lower middle class, shopkeepers, and small employers, clerks, etc., and subordinate professional men." And H. "Upper middle class—all above G. lumped together," "the servant-keeping class."

* So in vol. ix., p. 13, dealing with "crowding and earnings," on certain statements Mr. Booth bases the *average* earnings for an *average* number of employees "not necessarily or probably the true average for the year but an approximation to it."

The classes above quoted are arranged A, B, "very poor"; "lowest class"; and "casual earnings"; C and D, "poor," "irregular earnings," and "regular minimum"; E and F, "comfortable," "ordinary standard earnings," and "highly paid work," and G H, "well to do," "lower middle," and "upper middle."

The following statements further summarise the position:—A, B, C, D are "classes of poverty sinking to want"; E, F, G, H, "classes in comfort rising to affluence."¹³

"Omitting class A, which rather involves the question of disorder, we have in classes B, C and D the problem of poverty."¹⁴ "B," the "very poor," are at all times ¹⁴ p. more or less in "want," though only a percentage "not I think a large percentage," in distress. C and D "poor" "though they would be much the better for more of everything are not 'in want.' They are neither ill-nourished nor ill-clad according to any standard that can reasonably be used."

THE DATA FOR THE CLASSES JUDGED BY THE INDIVIDUAL CASE.

17. As further definition of these classes thirty individual cases are quoted and classified. The test applied is expenditure. A "male adult" standard of consumption is assumed and the members of the family are calculated as equivalent to so many parts of a "male adult." Thus an adult equals 1, a woman .75, and "in proportion for children."¹⁵ So a family—man, wife, and three children ¹⁵ I.—a son 18, two girls 8 and 6—make up 3.35¹⁶; the man ¹⁶ I. being 1, the wife .75, the son of 18—? .75, the two girls .85 between them.

In this "B" case the man is 38 "in poor health fresh from the infirmary"; his wife 43 is consumptive. The son of 18 earns 8s. a week as carman's boy. The neighbouring clergy send soup two or three times a week. The income is not stated but is supposed to be 10s. 3.4d. but the expenditure is stated to be 15s. 2*1*d. or 4s. 6d. a week per male adult.

In another "B" case (No. 4) in which the supposed income is 18s. 10.8d. per week, "the family run largely on credit." "The man, a bricklayer, gets something as caretaker, very little by his trade," The wife works as dressmaker and has to put out the washing. There are six children, thirteen, eleven, nine and a half, three and a half, two, and four months. The family is set down as equal to 3.7 in "male adult" measure and the expenditure at 24s. 5*3*d. or per "male adult" 6s. 7*1*d. a week.¹⁷

¹⁸ In a third, a "B" case on the line, it is stated, between "B" and "C" there are a man, wife, and five children (ten, nine, five, three, one). The man has irregular work as a wharf labourer at 20s. to 21s. a week. A girl not counted in the family is in service, and "still receives money and clothes from home." The wife earns 3s. 6d. a week by needlework. By steadiness on the man's part and good management on the part of the wife, they live as well as many families in "D." The "adult male" costs 6s. 8d. a week, the family 21s. 6d.—against a supposed weekly income of 22s.

In regard to these and the other cases quoted as typical the following points may be noted:—

In these cases no figures of actual income are given. There is an analysis of expenditure only. The supposed income is given and the amount expended very largely exceeds this. In case No. 1 (above), the expenditure is nearly a half more than the income. If this is to be taken as representing the normal condition of the family budget it is hardly to be accounted for by debt or the avoidance of payment, or by the thrice-weekly soup. Probably the real facts have not been disclosed. At least, the inference is strong that there must be some grave flaw in the statement.

In the second case the difference between supposed income and actual expenditure is almost as significant. The supposed weekly income is 18s. 6.8d.; the expenditure 24s. 5*7*d. If the man's actual income were as great as his expenditure, he would assuredly not be in "B" but in "C," or even "D." Here again, the inference must be that the facts of the case as a whole have not been ascertained.

The third case is significant from another point of view. It is said to be on the line between "B" and "C," but so good is the use of means that the family "live as well as many families in 'D'." Here the income though irregular is taken at 22s. (20s. to 21s. irregular, earned by the man plus 3s. 6d. earned by the wife)—slightly

more than the expenditure. The facts are probably better ascertained. Why then should not the family be placed in "D"? It is not wage, but the use of wage, that makes the difference between well-being and want. But, if that is true, as undoubtedly it is, this factor, socially a more important one than the amount of wage, would upset all these classifications. Here a family in which "poverty" is avoided by the good use of means is put in the same category with a family in which "poverty" is made acute by the thrifless use of means. The grouping indeed is arbitrary, unless this factor be taken into account and given its full value.

These cases then quoted by Mr. Booth to define his distinctions of classes more clearly, fail to do so. They suggest rather that the classes are practically arbitrary groupings based on no common principle. They show that the people have not really been classified by him into "poor" and "very poor."

THE DATA FOR CLASSES AS JUDGED BY THE STREET NOTES.

5, 7. 18. Turning to the streets given as specimens of classification¹⁹, we find how large a number of families have to be passed over as unknown. In St. Hubert Street, for instance, an A street: fifty-seven of the families have children at school, and are therefore classified; forty-one having no children at school, and therefore unknown to the School Board visitors, are unclassified. This represents a very large proportion of whom nothing is known, and everything has to be inferred.

Or, if we take a C-D street,²⁰ we find the figures: four B families; four C; ten D; three E families; twenty-one in all; and fifteen families without children, and therefore unknown to the School Board visitors, unless possibly children in these families had recently left school. Another C-D street has four F families; twelve E; twelve D, and five C; thirty-three in all, and eighteen unclassified.

Thus the margin of the unknown is very considerable, and the grouping of the streets—so far as the statistics are concerned—based on something very like guess-work.

The details supplied in the specimen entries are extremely meagre, and many, if not most, of those required for a classification drawn on the lines of social science, are wanting.

If classes A, B, C, D are to be described as "classes sinking to want" this evidence is essential, for C-D, it is stated, are "neither ill-nourished nor ill-clad according to any standard that can reasonably be used; and D are, taken as a body, decent, steady men, paying their way and bringing up their children respectably." Such a conclusion evidently can only be based on comparative statistics, not a single day estimate. But it is impossible to regard all A, B, C, D as "sinking to want." The notes of cases (I., p. 140), for instance, suggest that this is hardly the fact.

A classification of families on the down grade or on the up grade might be of real service, but much fuller information would be required for that.

ARE THE CLASSES TRUE CLASSES?

19. The first question is—are they true classes? A class is strictly a "summoning." Thus we might summon a class of the payers of income tax. Here the lines of division are accurately divided by specific count or admitted valuation. So in the case of paupers; all who apply for poor law relief can be counted accurately, and so from that point of view form a class, a "statistical" class, and in view of a particular law—the Poor Law—a social class. But in an investigation of society we can make no such clear counts or valuations; and our classification, to be valid as representing divisions of the population, must be a classification of people and their conditions in relation to social habits and organisation, or to put the question more broadly, the characteristics of the class must be characteristics which in the persons classified represent real factors in the formation of society.

Under the phrase "social habits," which are real factors in the formation of society, are included: habits of nurture and care of children; industry and use of leisure; income and its use; foresight; arrangements for the settlement of children in life, and their marriage.

Under the phrase "social organisation" are included the relation to religious bodies; to the elementary and other schools, school attendance, etc.; to trade unions or benefit societies; to charitable institutions and societies, and to the Poor Law, and so on.

All these questions have relation to society and social life, to whatever grade the individual and his family may belong. They are thus a basis for the classification of society as a whole; and it is obvious classes with different amounts of income might each be tested by such a rule of "social habit and organisation," though in different classes the actual methods of nurture and care of children, industry, etc., may vary considerably (as, for instance, in education in the elementary school and the public school, etc.), according to the purpose of life which each class has in view.

And classification of the people from the point of view of social life must then be founded on "real factors in the formation of society," real, that is to say, as representing the elements in society actually at work in making it.

20. The question is whether Mr. Booth's classification represents these real factors, or whether it represents rather more or less arbitrary groupings of the people.

If we take Class A we find it consists of those at the bottom of society whose "life is the life of savages with vicissitudes of extreme and occasional success." The measure here applied is strictly that of breach of social habit; and, if this be so, we want to know how many have broken loose from social habit. This is how the number is made up. (Vol. I. p. 37.)

This class Mr. Booth "puts at 11,000 or 1½% of the population, but this is no more than a very rough estimate, as these people are beyond enumeration, and only a small proportion of them are on the School Board visitors' books. If I had been content to build up the total of the class from those of them who are parents of children at school in the same proportions as has been done with the other classes, the number indicated would not have greatly exceeded 3,000; but there is little family life among them, and the numbers in my tables are obtained by adding in an estimated number from the inmates of common lodging houses, and from the lowest streets. With these ought to be counted the homeless outcasts who, on any given night, take shelter where they can, and so may be supposed to be in part outside of any census. Those I have attempted to count consist mostly of casual labourers of low character and their families, together with those in a similar way of life, who pick up a living without labour of any kind."

In calculating the number in this class, then, practically the method of grouping on the basis of school information is set aside. On that basis the number would have been 3,000; the number actually set down is 11,000. What is the ground for this very large addition is not stated. "An estimated number has been added from the inmates of common lodging houses, from the lowest streets and from homeless outcasts." But the data for this estimate are not given.

Yet this class—an important point bearing on the question of degeneracy—is, it is stated, to a very considerable extent, hereditary. On the other hand, it is said also that it is recruited with adult men from all others, and that the number of the children in the class is proportionately small—while that of young persons is "proportionately large." This analysis seems to be in itself contradictory. The class as described above may be considered a real class—uncivilised in a manner, living without the ordinary obligations of social habit. But comparative method is not applied to it. It is not possible therefore, from the data supplied, to say of what it is constituted or how far it is actually hereditary.

21. The second class is B—"Casual earnings"—"very poor." It contains 100,000 of 11·25 per cent. of the population.

In it are set 22,000 artisans, and 41,000 "casual labour."

"From whatever section (of employment) Class B is drawn, except among the sections of poor women, 19,095 in number (Table XVII.), there will be found many who, from shiftlessness, helplessness, idleness, or drink are inevitably poor."

This raises the question of the meaning of poor or "very poor"—whether they are or can be defined as a statistical class—or whether they are a social class and represent an aggregation of real conditions in relation to social habit and organisation.

23. Poor, like pauper originally, is "paucus" one of small means—a relative term.

It is clear that in the case of Class B as stated, many are shiftless, etc. The question with them is not of means, but the use of means.

The general supposition is that the people are poor not from such causes, but from not having enough—they would, as Mr. Booth says of Classes C and D “be much the better for more of everything all round.” And to carry out his programme Mr. Booth should have made a “depravity” class—thus defining at least two classes of poor—poor by literal want of means, and poor by “depravity.” But the poor by literal want of means—who may be called perhaps the “economic” poor are those only who, having ability to use means with a view to wealth or well-being, do not possess them.

But the material for any such division, by which “poor” should present a social class is wanting. Really the term is used by Booth only in a quite general sense—not suitable for the definition either of a social or a statistical class. Poor by depravity, by inability to use means, by weakness of mind, or of body—all very different groups are merged in one mass—so that for any scientific purpose the term “poor” loses all value as a definition. Difficult as it is to give to so vague and relative a word any precise meaning by direct count, it loses all its meaning when it is used for a large mass of the people—without regard to causes. And on Mr. Booth’s method the causes cannot be ascertained and they cannot, form, as they should, the ground of classification.

24. In the next class we have “C—intermittent wages” and above it, “D—small regular earnings.” Here is an economic difference which is very marked. C are “men who usually work by the job or who are in or out of work according to the season or the nature of their employment. “Many of the irregularly employed could not keep a permanent job if they had it, and who must break out from time to time.”

D are, as a body, decent steady men, paying their way and bringing up their children respectably.

Of C and D employment-sections are formed and the two thus find themselves in the same category—under, amongst other divisions, that of “irregular” in Section 3. They the “irregular” (Section 3) “have,” it is said, “a very bad character for improvidence”—“wanting in ordinary prudence;” but on the other hand Section 3 “for the most consists of hardworking struggling people, not worse morally than any other class, though thrifless and improvident.”

Here are two classes of which one is found on the line of “intermittent wage” with either as result or as cause thriflessness and improvidence, while the other D on the line of small regular earnings is the reverse. One asks whether the economic difference is the main factor. There is no evidence. Neither by examination of any large number of cases nor by any comparison of past and present is light thrown on the problem. But what is more, these two classes, economically so different, are merged and treated as one; and in the extension of Mr. Booth’s method from the East End and Hackney to London C and D as separate classes disappear. The class thus becomes no true class at all, either by economic difference or by social habit.

25. Reference has been made to the absence of any ascertainment of causes. A word more should be said as to this, for Mr. Booth submits a statement of causes, from notes of 4,000 families, and he thus classifies them:—

	A. B.	C. D.
	Per cent.	Per cent.
Loafers	4	0
Questions of employment; casual, irregular work, etc.	55	68
Questions of habit, drink, thriflessness	14	13
Question of circumstance; large families, illness	27	19

It is difficult to reconcile these figures with the general statements of the classes given above; nor do they furnish much information even as to causes.

Take employment. How far does this mean incapacity? Mr. Booth says, “Incapacity of two sorts is no doubt common: that which leads to low pay and that which leads especially to irregularity of employment.” But this does not help us at all. How far we ask does the factor of incapacity affect the question of employment—as a cause? And there is no reply.

Here again also most diverse conditions are brought under one head. Mr. Booth does not give the data for his classification—indeed if we may judge from his

entries, he has not the data. The classification fails at the critical point just when it is put to the test.

So if we ask why A, B—the outcast and residual classes—shows 14 per cent. in drink, and C with D the regular and steady class D 13, there is no evidence; and the figures suggest insufficient knowledge.

Useful as school board information may be, it hardly touches the many who send their children without demur, and only require to be “scheduled.”

THE REMEDY.

26. Then as to the remedy. It is to place B under State discipline, as it is a residual class of those who “from mental, moral and physical reasons are incapable of better work.” “The life would not be attractive; regular meals and fixed hours of work, which would not be short.” This “would not encourage idleness or weaken the springs of energy. The difficulty lies solely in inducing or driving these people to accept a regulated life.”

That is so indeed; and the difficulty is not met by the suggestion.

(1) It is proposed that there should be a social standard of State dependence. Membership of class B would hardly suffice, as indicating a good standard for State intervention. A fairer one would be to bring under State supervision the people on the down-grade wherever they might be, if the project were in any way feasible.

(2) A new servile and dependent residual class would be created, but out of this mass of incapacity what hope is there of any ultimate reform? Of the possibility of driving them to the regulated life, no evidence is offered.

(3) In East London and Hackney the B class is estimated at 100,000, excluding C and its bad ones. How shall such a population be brought under State discipline, and what state is strong enough to educate such an amount of adult incapacity as the class represents by direct measures? The grouping of the people in what are after all unreal classes aids not a whit in the solution of the problem. The remedy depends on the cause; and the causes are lost in the classes; and thus the class only confuses the issue.

(4) There is no evidence to show that such persons as are described as in Class B would be driven into regular employment. The evidence is the other way. Life itself is their taskmaster, and probably a more discerning one.

27. Instead of this system of investigation—it is to be hoped that at some time there may be made a real enquiry—based on closer and more complete observation, in which the enumeration will be actual and all the necessary facts verified. The conditions of families thus studied and grouped in types according to social habits might throw some real light on problems of poverty and deterioration.

SUMMARY.

28. The process of this inquiry and its limitations are now clear. Certain data are estimated, counted, and described as brought under view at one time, but without regard to antecedent facts and conditions. Hence, while there is an immense elaboration of statistics there are no data for forming conclusions.

The data thus viewed at one time are partly founded on statements, but very largely based on inference only; and they are far from complete.

Part of the data—that collected in regard to families with children at school in part of East London and Hackney is classified in numerical form and augmented by proportional additions of unknown members of families and in other ways, and thus made applicable to about half of the population of East London and Hackney, and then in turn these results are applied by a series of proportion sums and in other ways to the other, the unknown, half of the same population.

Then, lastly, the East London and Hackney figures are applied by yet other proportion sums and estimates to the metropolis as a whole.

In all these elaborate classifications, proportions, and adjustments there is an immense liability to error—and the errors cannot be checked in any sufficient manner. To data of the most general description precise figures are applied. Thus, facts by no means closely analysed and not really grouped at all (*cf.* the merging of classes C and D

above) are shrouded in an appearance of precision which is very misleading. As has been evident over and over again, popular writers and speakers have forgotten the intricacies of the process of making the classes, and have used the figures only, as in themselves evidence, summary, conclusion, confession, and admission of wholesale want and distress. To this result many of the generalisations in the book lend themselves (*c.f.* above: "classes of poverty sinking to want"); and to this use of the figures no protest is made; and unfortunately it is not possible to check errors and revise classifications in figures assigned to such conflicting and momentary data as are here brought together (though for the sake of the better guidance of public opinion it would indeed be desirable to do so).

The final consummation of the method is reached when by yet further proportion sums the figures of the metropolis are made applicable to the country at large, and the people discuss, "how the twelve millions on the verge of hunger may be fed."

Poverty is a relative term, a secondary or modifying cause. It may act as an obstacle or a spur according to the temperament and conditions on which it acts. It is applied here to classes more or less in want. But classes are not true classes *qua* poverty, but *qua* social habit. Unless in the lowest residual class to some extent, society is not a solid mass across which lines can be drawn horizontally as representing classes, but it is in a state of constant motion. To test social health, one should measure the upward and downward movements. Strictly, if we use the word at all, poverty, as a relative term accompanying certain social habits, would then represent ill-being, the downward movement, and wealth, or well-being, the upward movement.

To make these absolute classes many opposite and contradictory elements have to be forced into unity:

(a) It is taken for granted that there is an equation applicable in all classes (B to F) between (a) members of a family and (b) necessities, e.g., the man stands for 1 in the expenditure, the wife '75, and so on.

(b) Every one is assumed—class by class—to be, though individual in ability and strength, subject to and acting in accordance with an average—the average which is assumed by placing quite different types in one class, e.g., the careful, the drinking, and the thrifless. Thus the characteristics which are important in the making of good social habit are averaged away—indeed ignored. All that the use of money adds to the value of money is ignored and neutralised.

(c) In the same way all physical differences, even those of ordinary and everyday importance—age, sickness, feebleness, etc.—have to be ignored and averaged away.

Thus we have as a statistical creation a degraded society which is from the point of view of social science hardly less like nature than the "economic man" of some political economists.

"Poverty."

THE METHOD.

29. Mr. Rowntree takes the town of York as the subject of his inquiry. Mrs. Bernard Bosanquet has already criticised his method (and Mr. Charles Booth's) very effectively in a paper entitled "the Poverty Line," to which Mr. Rowntree has made some rejoinder, and in a paper in the *Contemporary Review* for January, 1904—"Physical deterioration and the poverty line." Many points dealt with in those papers may be passed over here.

Mr. Rowntree's aim is to ascertain the extent of destitution, i.e., insufficiency of means to obtain necessities and to learn how far this destitution is culpable—that is due to causes assumed to be within the control of the individual, drink, etc.

His method is this—

1. To count and estimate the number of people just as they are at a given time (as do Mr. Booth and Dr. Hunter) instead of using the comparative method.

2. To ascertain the income of the head of the family and of the children who earn and of the wife's.

3. To class families according to income, on the understanding that a man, wife, and two to four children are a "moderate" family, and that if a man has a larger family, he is placed in a lower income class and *vice versa*.

4. To fix a standard of necessary food and the cost of it and to add the latter *per individual* to the cost of rent, clothing, etc.

5. Then to divide the income class by class by the total cost of necessary living for the class, and thus ascertain how far the income suffices for that purpose.

The sum set out is this:—

Moderate family + Cost of necessities.

Income.

The sufficiency of the method turns on: (a) the exactness of the investigation of the amount of income; (b) the reality of the classification of the families; (c) the standard fixed for necessities and its applicability.

AMOUNT OF INCOME.

30. As to the first—the exactness of the investigation of income.

The income classes are—

- A. under 18s. a week.
- B. 18s. and under 21s.
- C. 21s. and under 30s.
- D. Over 30s.
- E. Servants.
- F. Servant keeping class.
- G. In public Institutions.

The population dealt with is 75,000.

The inquiry refers to 46,754 people or 11,560 families.

The inquiry is made by house to house visitors, and the classes are settled after consultation with the clergy, etc., and as to wages, after general consultation with employers.

Everything depends on precision in regard to the p. 14. income. This is what is said:—

The visitor "found that the people with few exceptions were willing to supply the information sought. In some cases there was a disposition to give incorrect information, but experience soon enabled him to distinguish between truth and falsehood, and in doubtful cases the facts stated p. 26 were checked by neighbours and others."

"The occupation of each of the workers was ascertained and sometimes also direct information regarding the wages earned. Where this information was not available the p. 27. wage was estimated. In the case of skilled workers the wages were assumed to be the average wage which obtains in the district for the particular trade." These "it is believed, have been estimated with a large degree of accuracy." "In all cases, in assuming wages, allowance has been made for short time, including public holidays not paid for, also over-time, and cost of tools, etc." (The italics are mine.) This allowance is based on information from trade unions, masters, etc.

No uniform allowance has been made for loss of wage through illness, but in the estimates of short time some allowance under this head has been made.

A note on this—is given as a "rough indication"—2d. p. 27. a week in a sick club gives 7s. 6d. for six weeks, and 3s. 6d. for another six weeks of sickness.

"Working upon these lines, the earnings of every wage earner have either been ascertained or carefully estimated."

Afterwards the word "estimate" is dropped, and the reader cannot but think he is dealing with actual earnings. On page 116 the words used are "the total earnings of every working class family were ascertained."

31. Now to make some comments:—

(a) The system was one of visitation without verification in the individual case, and as to the earnings of the man, the wife, and the children, this, even with the other sources of information mentioned, is quite insufficient—at least, it would be elsewhere.

Take at random a few families visited elsewhere by people of long experience—and then tested by verification:

(1) Man forty-five, dock labourer; stated earnings, 12s. to 18s.; ages and stated earnings of children; girl nineteen; boy fourteen, 12s.; total stated earnings, 24s. to 30s.; total verified earnings, average 4ls.

(2) Man thirty-five; railway labourer; stated earnings 23s.; wife 5s.; in all 28s.; total verified earnings 33s.; and so on.

Obviously visitation without verification in the individual case is no sufficient means for ascertaining the truth.

(b) Next the special examination of seemingly "doubtful" cases is a most misleading method—the inquirer is left in a position of thinking he knows he is right, without knowing where he may be wholly wrong.

(c) Next, the assumption that the skilled worker earned the average wage of the district is quite insufficient in compiling accurate data, which are to be applied to families whose incomes are to be treated as purchasing necessities in very small amounts per consumer.

(d) Next, if deductions are made from the wage—these should be set out in their money value—that the sum may

be before the reader, the notes quoted above are no real guide.

(e) Lastly, as to the earnings of children: "A girl or lad" it is stated "will pay 5s. or 9s. weekly, while a man will pay 9s. or 14s. to the household." But this is a very large variation surely, on which to base either estimate or average, apart from a knowledge of the actual facts—a difference of 55 per cent. Yet what the child actually gives may make all the difference in the family. The family is the social, and in great measure the industrial, unit. Many cases could be quoted in support of this.

The great variation in the sums available from children in particular cases can be shown by reference to many instances. The variations are hardly such as could be dealt with by general average.

32. In regard to the statements of wages Mr. Bowley's paper in the "Proceedings of the Royal Statistical Society," vol. lxv. of 30th June, 1902, page 359 may be considered. The paper is a note on wages in York, 1899 (B.S. Rowntree). After quoting from Mr. Rowntree's book passages respecting his method and the assessment of wages, etc., Mr. Bowley writes:—

"These figures are not published in detail in the book but merged in family incomes and grouped together. Mr. Rowntree, however, has caused the statements of all adult male wage earners to be extracted from his material." On his basis the wage given has only to be multiplied by fifty-two, to give the annual earning. "The figures are estimates, and in some cases estimates only to the nearest round number. Thus, in many of the skilled trades the average weekly wages approximate to 30s. in some cases being 1s. or 2s. more, in others 1s. or 2s. less, and in such cases the wages are entered at 30s." Hence "the marked grouping is very noticeable, indicating that the gap between skilled and unskilled labour is more perceptible in York than in London, or in the country as a whole." The table divided to show shilling differences is suggestive. The total number of wage earners dealt with is 9,544, the number set down as receiving a wage of 20s. is 1,532, those that receive a wage of 19s., only twenty-seven, those who receive a wage of 21s., only thirty-one. Some other figures stand thus:—

At 23s.	- - -	499	At 30s.	- - -	2,398
,, 24s.	- - -	810	,, 35s.	- - -	260
,, 25s.	- - -	394	,, 40s.	- - -	420
,, 28s.	- - -	471			

The intervening entries of wage have but small numbers of earners entered against them.

Thus analysed, it is clear that the wage table suggests rounding such as one finds in census work in the case of ages. This rounding clearly seems due to the method adopted by Mr. Rowntree, and it appears to be a very great defect, especially as the question at issue is the ability to utilise a small income for the purchase of very small quantities of necessaries. It is not possible logically to connect large generalisations as to wage with minute investments of the generalised wages in a large number of particular cases.

CLASSIFICATION OF THE FAMILIES.

33. The second point is the sufficiency of the classification as to *families*.* It stands thus:—

- A.—Under 18s. for a moderate family.
- B.=18s. and under 21s. for a moderate family.
- C.=21s. and under 30s. for a moderate family.
- D.=over 30s. for a moderate family.

34. Some points may be noted:

The great inequality of the classes as measured by income.

Class B stands at 18s. under 21s.

Class C stands at 21s. and under 30s.

Next a moderate family=two to four children—this is an element of great variability in making up the classes.

Next the effect of this adjustment of family scale to income scale is remarkable; thus, if the family income equals 22s. in the case of a parent and four children, the family is put in C, but if of five or more, it is pushed down at least into B. The difference of the one child puts the case within the range of a class earning 18s. and under 21s., instead of in the range of a class earning 21s. and under 30s., and strictly the case might be pushed even further down and become an A case.

So again with a family—income 27s., two parents and two children are in C, but if they have only one child, then in D. This is quite arbitrary.

How the question stands is indicated by the following note on Class A. Dividing the income in the class made

up in accordance with the rules stated above, we have in it families receiving from under 4s. 5d. a head to 2s. 3d. per head or less:—

Thus A equals moderate family with income *under* 18s. a week.

A moderate family equals two parents and two to four children. (2+2; 2+3; 2+4.)

Eighteen shillings or less is then divisible in a moderate family.

Therefore A equals any sum per head *under* the following figures:—

- (1) A equals
18s. (or less)—

$$\begin{array}{l} \text{s.} \\ 2+2=4\cdot5 \\ \text{or } 2+3=3\cdot6 \\ \text{or } 2+4=3\cdot0 \end{array} \quad \left. \right\} \text{per head.}$$

(2) If there is one parent and two children, or two-parents and one child, A would equal any sum *under* the following figures:—

$$\begin{array}{l} \text{18s. (or less)} \\ \hline \text{1+2} \\ \text{or } 2+1 \end{array} = 6s. \text{ per head.}$$

Unless these be pushed up into the 18s. to 21s. class—Class B.

(3) But, on the other hand, all the immoderate families in A must remain in A.

So A equals not only the above in (1) but often immoderate A families:—

$$18s. (\text{or less}).$$

$$\begin{array}{l} 2+2 \\ \text{or } 2+3 \\ \text{or } 2+4 \end{array}$$

But the following *as well* 2+5 } as divisors of the
2+6 } 18s. or less.

(4) And into A are also pushed all the immoderate families from B—earning above 18s. and under 21s., and including families falling to it from B to A. Taking shilling divisions the range covers the following cases:—

19s.

2 + 5 or 6, &c., children;

Which = 2·7s. or 2·3s., &c., per head.

20s.

2 + 5 or 6, &c., children;

Which = 2·8s. or 2·5s., &c.;

21s.

2 + 5 or 6, &c., children;

Which = 3s. or 2·6s., &c.

Therefore A, including all the cases in (1) (3) and (4) above, covers any income from 4·5s. per head downwards.

This is obviously a very large range—a kind of sliding scale of income checked by family in which there is no underlying principle at all. For the question must be asked: Are these classes real classes? The answer must be in the negative. The classes are but groups more or less indefinitely formed in connection with differences of income and family. They are not based upon any real characteristics; nor would they be necessary for Mr. Rowntree's purpose, if he rested his case upon observation of particular instances and verified material only.

35. Another test might be applied on Mr. Rowntree's lines of averaging. I have taken fourteen families at hazard—not families in Mr. Rowntree's book, but families of persons who have applied for relief to a Charity Organisation Committee.

The average wage of the fourteen families as returned at 23·14s. In five of the fourteen families there is definite upward movement. These omitted, there remain nine families with an average wage of 9s. This *average* wage would bring all such families into Class A.

But as the following notes show, the relation between average wage and the condition of the families in the class is quite unreal. The cases are as follows:—

- (a) Pension case, 12s. 6d., man and wife.
- (b) Infirmary case.
- (c) Heavy drinker.
- (d) Discharged summarily: falsification of accounts.

- (e) Bad eyes; large relief; begging; bad temper.
- (f) Old, children well able to support, second marriage; family quarrel.
- (g) Weakly; casual labourer; dependent largely on wife and children.
- (h) Old, son "disappeared" but when found well able to help, rent 10s.
- (i) Drink.

It will be noticed in how few of these cases the question of difficulty or "poverty" is one of income as against expenditure. By reference to Class A in Mr. Rowntree's sample of fifty-one entries on page 33 it will appear that in those cases too the true issue is not income as against expenditure but social habit. Thus in his fifty-one cases three are cadger cases, two are mentally deficient, in seven there is drink, five are entered as large families but not further investigated; and twenty-two are set down as poor law relief but not further investigated.

In the notes of these sample cases there is no statement of wages or of finance and no statement of ages. It seems doubtful indeed whether such evidence was obtained. If it were, it would tend greatly to modify Mr. Rowntree's own conclusions.

STANDARD FIXED FOR NECESSARIES.

36. We turn next to the standard fixed for necessaries and its applicability. It is evident that the investigation, so far as it has yet been under consideration, does not afford a basis for precise numerical results. Yet it is upon this basis that the utility of the investigation depends. A food test is next applied. This is done in two ways.

The Local Government Board issued three years ago a dietary for people in the workhouses and infirmaries. There were three conditions mentioned in their circular letter—

- (1) The inmates were examined by a medical officer.
- (2) There were "plain" and "infirm" diets; and
- (3) There were children's diets.

"Owing to the great difference of individual appetites in the case of children, it should be remembered that in their dietaries the prescribed rations represent the average allowance for a group of children and not the amount for a particular child."

- (4) They note that the bread allowance is excessive; and;
- (5) They note that there is a tendency to waste food which should be checked.

From these "plain" dietaries Mr. Rowntree has made a dietary and priced it according to the contract prices of the York Board of Guardians.

Next he has divided his families as grouped on the above plans between "Poverty lines."

Primary Poverty population, 7,230; families, 1,463.
Secondary Poverty (or self-caused), 13,072.

The "Primary Poverty" he has divided into six sections according to immediate cause.

Households affected.		Immediate cause.
403		Death of chief wage earner, 15·63.
146		Illness or old age of chief wage earner, 5·11.
38		Chief wage earner out of work, 2·31.
51		Irregularity of work, 2·83.
187		Large family, 22·16.
640		Regular work and low wages, 51·96.

The whole makes 9 per cent. of the population.

Taking these sections Mr. Rowntree makes budgets charging the cost of food as above, showing a deficiency for the section and then working it out per family. Each adult is taken as requiring an equal amount according to the standard of an average man.

37. To pass to comment. The result of all this cannot be otherwise than unreal, in spite of its being set down in seemingly precise statistics. Thus the consumption of the food depends not on an average of the consumption of adults but on the digestive powers of those who partake of it. Thus the old would take less, the young more; but no ages are given. Weight and size would tell; but the standard figures apply only to a man of eleven stone. The waste which is made in the workhouse need not be made in the home; but here it is not—on this method, cannot be, taken into account. Optional variations in diet, which are petty in themselves, but stand for much in individual cases, are also necessarily ignored.

The method might be of use if applied to individuals who had been medically examined, but here it is applied to the average of a class whose physical condition has not been examined, in conjunction with a statement of income which is after all only an estimate.

Then as to the standard itself. Mr. Rowntree requires in all classes 3,500 calories per diem, food being analysed into calories, i.e., into degrees of heat productivity. The value of the food as a source of energy is measured by the amount of heat it produces on complete combustion. The insufficiency of this method has been recognised and it cannot be taken as finally settled—certainly it cannot be accepted without demur as here applied.

The experiments that have been made are mostly on inmates of Institutions under known conditions and living healthy lives. From these experiments it has been concluded that a healthy man of eleven stone weight and doing a moderate amount of muscular work must have from 3,000 to 3,500 calories if his needs are to be fully covered. "Standard dietaries," it is urged, "are only of limited use . . . only drawn up to meet the needs of *typical* individuals living under known conditions and doing a moderate amount of muscular work." Further, the calories needed vary according to occupation: so a clerk at his desk is stated to require only 2,500 calories, a man at moderate work, such as house-painting, 2,631, a navvy at hard labour, a highly paid man, 3,513. A point like this makes the greatest difference in Mr. Rowntree's divisors; but for it he makes no allowance.

Many other points may be mentioned, but one will suffice. In the case of women Dr. Dunlop states that "their food requirements have received comparatively little attention," yet these elaborate calculations, with some modifications, are applied to them as they are to men. For all working male ordinary persons, except those of more than usual size, twelve stone in their clothes, and doing ordinary work, Dr. Dunlop furnishes dietaries amply sufficient which would cost say, 2d., a meal.

It may be concluded that Mr. Rowntree's method is extremely speculative, that the information on which it is based is far from sufficient, and that neither method nor information provide the material that would be required for drawing trustworthy "poverty lines," if, indeed, such a task could be accomplished at all with scientific scrutiny in reference to a large population. At least any inquiry should be restricted to observed data, to actual counts, and to classifications founded on social habit.

A CONTRAST.

38. One contrast may be added.

Mr. Charles Booth applying his method to London concludes that "after deducting loafers and criminals, 29·8 per cent. of the people are in perpetual poverty, owing to the family earnings being less than 21s. a week."

Mr. Rowntree, copying Mr. Booth's method, concludes that 9·91 per cent. of the population of York, which, he holds, is generally representative of urban population, have earnings insufficient for the maintenance of merely physical health.

Mr. Booth includes in his 29·8 per cent. those (*see* above) with 18s. to 21s. a week who are "neither ill-nourished nor ill-clad according to any standard that can reasonably be used." On the other hand, he "does not enter into questions of economical or wasteful expenditure." Accordingly Mr. Booth counts as in the same perpetual poverty alike the wasters and the well-nourished and well-clad.

Mr. Rowntree calculates, as he believes, those whose poverty is due to their own fault at 18·51, and those who have insufficient earnings etc., at 9·91, in all 28·42, and fortifies his conclusion by the similarity of his figures to Mr. Booth's.

It is plain that there is no real similarity. Mr. Charles Booth ignores economical or wasteful expenditure, and includes the well-clad and well-nourished and makes a percentage of 28·8.

Mr. Rowntree recognises wasteful expenditure or self-caused poverty, and finds none in his class provided with sufficient means to command the necessities of life—none well-clad and well-nourished—and makes a percentage of 28·42.

How these percentages have been arrived at has been shown; and it is plain that they cannot be said to be consistent one with another, nor either of them based on sufficient information.

APPENDIX IV.

INSANITARY AND OVERCROWDED HOUSE PROPERTY.

This Memorandum is intended to be an answer to the following questions, and is confined within the scope covered by those questions; it is not intended to deal with Ireland, nor in any detail with Scotland.

I. What is the state of the law on the liability of owners and occupiers of house property in respect of insanitary or overcrowded conditions?

II. What powers has the local authority to bring home this responsibility to the persons implicated, and how can it be made to exercise those powers?

III. What checks exist upon bad building in the case of new tenements, and how are they enforced?

INTRODUCTORY.

The general law with regard to housing in England and Scotland is contained in two sets of Acts, viz., the Public Health Acts and the Housing Acts. Of these the following contain provisions bearing upon the points discussed in this Memorandum:—

1. Public Health Act, 1875—38 & 39 Vict., c. 55.
2. Public Health Acts (Amendment) Act, 1890—53 & 54 Vict., c. 59.
3. Public Health (London) Act, 1891—54 & 55 Vict., c. 76.
4. Public Health (Scotland) Act, 1897—60 & 61 Vict., c. 38.
5. Housing of the Working Classes Act, 1885—48 & 49 Vict., c. 72 (see note under II., 3).
6. Housing of the Working Classes Act, 1890—53 & 54 Vict., c. 70.
7. Housing of the Working Classes Act, 1903—3 Edw. VII., c. 39.

Of the above (1) and (2) apply to England outside London, (3) to London, and (4) to Scotland, (5) and (6) to England and Scotland, and (7) to England alone. There are various other minor Amendment Acts, etc., which need not be referred to here.

A most useful book on the subject of housing, both from a practical and legal point of view, is *The Housing Handbook*,* by W. Thompson, published recently by the National Housing Reform Council.

I.

I.—Liabilities of owners and occupiers under the Public Health Acts.

The liabilities of owners and occupiers under the above Acts are many and various, and subject to different conditions. An attempt is here made to classify them under the following heads:—

- A. Where the owner or occupier is expressly obliged or forbidden to perform or permit any act or thing.
- B. Where no legal liability rests with the owner or occupier until he receives notice from the local authority. On default of performance after notice, penalty attached.
- C. Same as B., but no penalty attached (except, in most cases, liability to pay the local authority's expenses for performing the work).

(The references given are to the Public Health Act, 1875, except where otherwise stated. There are corresponding sections in nearly every case in the London and Scotland + Acts—for a tabular statement of these see *Thompson*, App., p. 72.)

A.—It is unlawful to build or rebuild any house in an urban district without covered and properly constructed drains. £50 penalty for contravention of this section.

S. 25.

* Note.—This book was published before the passing of the Housing Act, 1903.

+ Note.—The Scotch Act, later in date than the English Act, contains in some respects fuller and stronger provisions.

It is unlawful in an urban district, without the consent of the local authority, to build over a sewer or under a carriage-way. Forfeit of £5 to the local authority, and 40s. for every day on which the offence continues after notice given.

S. 26.

It is unlawful to build or rebuild any house without a sufficient water-closet, earth-closet or privy, and an ashpit furnished with proper doors and coverings. £20. penalty for contravention of this enactment.

S. 35.

It is unlawful to erect any new building on ground filled up with offensive matter. Penalty £5 and 40s. a day.

53—4 Vict. c. 59, S. 25.

It is unlawful to remove, or obstruct the local authority in removing, any matters which the local authority are authorised by the section to remove, i.e., house refuse, etc. £5 penalty for each offence.

S. 42.

It is unlawful in an urban district—

(a) To keep pigs in any dwelling-house or so as to be a nuisance.

(b) To suffer waste or stagnant water to remain in any dwelling-house for twenty-four hours after notice by the local authority.

(c) To allow the contents of any privy, etc., to overflow or soak out.

40s. penalty for each offence, and 5s. a day during continuance.

S. 47.

It is unlawful to let or occupy cellar-dwellings (including any vault or underground room) built or rebuilt after the passing of the Act, or not lawfully let or occupied at the date of the Act.

It is unlawful to let or occupy any cellar-dwellings whatever, except under certain conditions.

Twenty shillings penalty for each offence for every day during which the offence continues after notice from local authority. After two convictions within three months, Court of Summary Jurisdiction may order premises to be closed.

Ss. 71—75.

The keeper of a common lodging-house shall—

(a) Register his lodging-house. £5 penalty and 40s. a day.

(b) Lime-wash the walls. 40s. penalty.

(c) Give notice of fever or infectious disease to the medical officer and relieving officer. £5 penalty and 40s. a day.

After three convictions, Court may disqualify for keeping a common lodging-house.

Ss. 77, 82, 84, 86—88, and see 53—4 Vict. c. 59, S. 32.

B.—Obligation on owner or occupier, after notice from local authority, to repair drains, privies, etc.

Ten shillings penalty for every day during which he makes default.

S. 41, 53—4 Vict. c. 59. S. 19.

Obligation on occupier to obey bye-laws, if made, imposing on occupier duty of cleansing of footways and pavements, removal of house refuse, etc., and, when the local authority themselves undertake or contract for the work of removal, duties in connection with such removal so as to facilitate the work of collection, and (in urban district) prevention of nuisances, etc. Penalty may be attached by bye-laws of £5 and 40s. for each day after notice of offence. Ss. 44, 183, 53—4 Vict. c. 59, Ss. 26, 29.

Obligation on owner or occupier, after notice from local authority, to whitewash and purify any house. Ten shillings penalty for every day during which he makes default.

S. 46.

Obligation, in urban districts, to remove manure, etc., from mews after public notice by urban authority for periodical removal. Penalty 20s. for each day while accumulation continues.

S. 50.

Obligation on keeper of common lodging-house, if required by local authority, to affix a notice to such house with the words "Registered Common Lodging House." £5 penalty and 10s. a day.

S. 79.

Obligation on owner or keeper of common lodging-house, after notice by local authority, to obtain proper water supply. If notice not complied with, local authority may remove house from the Register during default S. 81.

Obligation on keeper of common lodging-house, if required by local authority, to report as to vagrants lodging there. £5 penalty and 40s. a day. Ss. 83, 86.

Obligation on keeper of common lodging-house to admit any officer of the local authority to inspect the premises, when required. £5 penalty. S. 85.

Obligation on any person by whose default a "Nuisance" has arisen, or on the owner or occupier, after notice by the local authority to abate such nuisance. On non-compliance with notice, liability to appear before Court of Summary Jurisdiction on complaint by local authority. £5 penalty and order to abate or prohibiting recurrence or for both abatement and prohibition. If nuisance renders a house unfit for human habitation, an order may be made prohibiting its use till habitable. On disobedience to order for abatement, 10s., or for prohibition, 20s. a day penalty. After two convictions for overcrowding within three months an order for closing the house may be made. Appeal to quarter sessions, and other regulations. Ss. 91, 94-99, 103-109, 269.

Note.—In the above sections "nuisance" is defined to mean a number of things, including "any premises in such a state as to be a nuisance or injurious to health" and "any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates, whether or not members of the same family."

Obligations to obey building, etc. bye-laws—penalty may be attached by bye-laws of £5 and 40s. for each day after notice of offence.

Ss. 157-159, 183.

53-4 Vict. c. 59, s. 23.

Obligation to obey bye-laws, fixing number of occupiers etc., drainage, etc., and cleansing, etc. of houses let in lodgings other than common lodging houses. Penalty may be attached by bye-laws of £5 and 40s. for each day after notice of offence.

Ss. 90, 183, 48-9, Vict. c. 72, s. 8.

Prohibition to any person to use or suffer the use of rooms over privies, etc. (except water and earth closets), as dwelling or sleeping rooms. Penalty, after seven days notice, of £40 or 10s. a day. 53-4 Vict. c. 59, s. 24.

Obligation on keeper of common lodging house to obey bye-laws for fixing, etc., the number of lodgers, for the separation of the sexes, for promoting cleanliness and ventilation, for giving notices and taking precautions in the case of infectious diseases, and for well ordering of common lodging house. Penalty may be attached by byelaws of £5 and 40s. for each day after notice of offence.

Ss. 80, 183.

C.—Obligation on owner or occupier, after notice from local authority, to drain undrained house. S. 23

Obligation on owner or occupier, after notice from local authority, to provide proper privy accommodation. S. 36.

Obligation, in urban districts, on person to whom it belongs, or occupier of premises, to remove accumulation of manure, etc., on notice from inspector of nuisances. S. 49.

Obligation on owner to provide sufficient water supply, after notice from local authority. S. 62.

2. Liabilities of owners and occupiers under the Housing Acts.

The Housing Acts, do not, for the most part, affect the owner or occupier directly. They lay upon the local authority certain duties and responsibilities, and give them certain powers of dealing with house property. The position of the owner and occupier is of course indirectly affected, but it seems better to deal with the Housing Acts under the next section of this Memorandum.

There are, however, two points which may be mentioned here—

(a) If in any way an owner or occupier obstructs the carrying out of the provisions of Part II. of the Act of 1890, with respect to any house, the court may order the owner or occupier to permit the provisions to be carried out. On failure to comply with such order, penalty of £20 a day as long as the failure continues. 53-4 Vict. c. 70 s. 51.

(b) In any contract for letting for habitation by persons of the working classes a house or part of a house, there shall be implied a condition that the

house is in all respects reasonably fit for human habitation. The above only applies to contracts made after August 14th, 1885.

The above is extended by the Act of 1903, so as to apply, as regards any contract made after the passing of the later Act, notwithstanding any agreement to the contrary. 53-4 Vict. c. 70, S. 75.
3 Edw. 7. c. 39, S. 12.

II.

1. Powers * of Local Authorities † under the Public Health Acts.

(The references given are to the Public Health Act, 1875, except where otherwise stated. There are in nearly every case corresponding sections in the London and Scotland Acts.‡ For a tabular statement of these, see Thompson, App. p. 72.)

Obligation to give notice to owner or occupier to drain undrained houses. If notice to drain not complied with, local authority may do the work and recover expenses.

S. 23.

Power to urban authority to give notice as to buildings built over sewers, or cellars, etc., constructed under carriage ways. Power to pull down such buildings, etc. and to recover expenses.

S. 26.

Obligation, on report of surveyor or inspector of nuisances, to give notice to owner or occupier to provide a sufficient "water-closet, earth-closet, or privy, and an ashpit furnished with proper doors and coverings" in any house. If notice to make such provision not complied with by owner, local authority may do the work and recover expenses.

S. 36.

Obligation to provide that all drains, etc., within district are constructed and kept so as not to be a nuisance or injurious to health.

S. 40.

Power to examine drains, privies, etc., on complaint of nuisance by any person, and obligation (if found insanitary), to order alterations. If order not complied with, local authority may do the work and recover expenses.

S. 41.

53-4 Vict. c. 59, s. 19.

Obligation to provide for cleansing of streets, footways, etc., removal of house refuse, etc., and cleansing of privies, etc. Local authority may themselves undertake, or contract for, these matters, and must do so if required by the Local Government Board. If they themselves undertake or contract for removal of house refuse or cleansing of privies, etc., they are liable to a penalty of 5s. a day, payable to occupier, for neglect to carry out the work. Where they do not themselves undertake or contract for cleansing footways, etc., removing refuse, or cleansing privies, etc., they may make bye-laws imposing the duty on the occupier; this does not extend to the cleansing of streets. Urban authority may also make bye-laws for the prevention of nuisances arising from snow, filth, ashes, etc., and for the prevention of keeping animals so as to be injurious to health. Ss. 42-4.

Obligation, on certificate of medical officer or any two doctors, to give notice to owner or occupier to whitewash and purify insanitary houses. If notice not complied with, local authority may do the work and recover expenses.

S. 46.

Power to take proceedings for cleansing offensive ditches. S. 48.

Obligation (in urban districts) on inspector of nuisances to give notice for removal of manure, etc. If notice not complied with urban authority may sell manure and recover balance of expenses from owner of manure or occupier.

S. 49.

Power to give notice for periodical removal of manure from mews, &c., in urban districts. S. 50.

Power to give notice as to stagnant water in a house. Obligation to abate certain nuisances §; and recover expenses from occupier.

S. 47.

* In this part of the Memorandum a distinction is drawn between a mere "power" given to the local authority and a power coupled with a duty, i.e., an obligation; between "may" and "shall."

† Rural District Councils can obtain many powers of an Urban District Council under the Public Health Acts by applying to Local Government Board to be invested with the particular urban power required.

‡ See note on preceding page.

§ See preceding page.

Obligation, on report of surveyor, to give notice to owner requiring him to obtain an adequate water supply; if notice not complied with, local authority may do the work and recover expenses. S. 62.

Power to give notice to persons illegally letting or occupying cellar dwellings. Power to close cellar-dwellings on direction by Court of Summary Jurisdiction. Ss. 73, 75.

Obligation to keep register of common lodging-houses, to inspect and approve by an officer, and to make bye-laws for the regulation thereof. Power to require water-supply and to order reports, etc. Ss. 76-89.

Power to make bye-laws for the regulation of houses let in lodgings (other than "common lodging-houses.") S. 90. 48-9 Vict. c. 72. Ss., 8, 10.

Obligation to inspect for nuisances,* and to enforce provisions of Act in order to abate the same.

Obligation to give notice to owner or occupier to abate on receipt of information. On non-compliance, obligation to make complaint to justice. Ss. 91-95.

Power of entry where order for abatement of nuisance has been made, and to abate the nuisance and recover expenses. S. 98.

Power of entry into any premises for examination as to existence of nuisance, etc., etc. S. 102.

If local authority make default, Local Government Board may authorise police officer to institute proceedings. S. 106.

Power to apply in certain cases for closing order against overcrowded house. S. 109.

Power to urban authority, and in most of the following cases to rural authority, if invested with urban powers or to a limited extent where Part II. of Public Health Acts Amendment Act, 1890 is adopted, to make bye-laws with respect to the level width and construction of new streets, and provisions for the sewerage of new streets, the construction of foundations, roofs, walls, and chimneys of new buildings, open space about buildings, the ventilation, drainage, and closing of buildings, water closets, earth closets, privies, ashpits, and cesspools in connection with buildings, the supply of water for closets, the structure of floors, hearths, and staircases, and the height of rooms, the paving of yards, etc., and the provision of means of access for removal of refuse.

Notice to be given of laying out streets or erection of buildings: power of inspection.

Power to enforce observation of such bye-laws by pulling down buildings wrongly constructed, etc., and to recover expenses. Ss. 157-159. 53-4 Vict. c. 59. s. 23.

Power to give notice to persons illegally occupying rooms over privies. 53-4 Vict. c. 59. s. 24.

Power to urban authority to cause to be swept and cleaned common courts and passages, and to recover expenses. 53-4 Vict. c. 59. s. 27.

All offences and penalties, etc., are to be prosecuted and recovered in manner provided by the Summary Jurisdiction Acts. S. 251.

2. Power to enforce carrying out of duties of Local Authority under the Public Health Acts.

Obligation for Local Government Board, on receiving complaint that a local authority has made default in providing sewers or water supply, or in enforcing any provisions of the Act which it is their duty to enforce, to make an order limiting the time for the performance of their duty. If duty not performed by the time limited, power to enforce order by Mandamus, or in the alternative to appoint some one to carry out the duty, and recover expenses from the local authority. S. 299.

3 Powers of Local Authorities under the Housing Acts.*

The main Housing Act is the Act of 1890. This is divided into three parts:—

Part I. provides for the clearing of unhealthy areas, and making improvement schemes; this part applies to London, boroughs, and urban districts.

Part II. provides for the closing or demolition of individual insanitary houses, and the reconstruction of small unhealthy areas; this part applies to London, boroughs, urban districts, and rural districts.

Part III. provides for building new houses for the working classes. This part is adoptive.

The whole Act applies, with modifications, to Scotland; but the Act of 1903 does not apply to Scotland.

Part III. does not affect owners or occupiers of insanitary dwellings, and is therefore outside the scope of this Memorandum. The references hereunder given are to the Act of 1890, except when stated to be to the Act of 1903.

A. As to the Clearing of unhealthy areas.

On an official representation, local authority shall proceed to make an improvement scheme. S. 4.

Note.—This official representation means representation by a medical officer of health. Any twelve ratepayers, or two justices, may complain to the medical officer, and he is bound to make a representation.

Any twelve ratepayers, on default of medical officer, may appeal to the confirming authority (*see below*, S. 8.)

S.S. 5, 16; 3 Edw. 7. c. 39. S.4. (2).

Notice to be served on owners, lessees, and occupiers of lands proposed to be taken compulsorily.

S. 7.; 3 Edw. 7. c. 39. s. 5. (1).

All improvement schemes of the local authority to be confirmed by a Secretary of State[†] (Home Office) in London, and by the Local Government Board outside London. S.8.

The Act goes on to deal with procedure on making an improvement scheme, rehousing, etc.

B. As to the closing etc., of insanitary houses, and the clearing of small unhealthy areas.

Obligation on the medical officer to represent to the local authority any dwelling house unfit for habitation. Any four householders, and in rural parishes, a parish council, may complain to the medical officer, who is then bound to inspect and report. Such householders, on default of action by local authority, may appeal to the Local Government Board.

S.s. 30, 31; 56 and 57. Vict. c. 73, s. 6 (2).

Obligation on local authority to inspect their district, and, if necessary, to take proceedings under the Public Health Acts, for closing houses unfit for human habitation. By the Act of 1903, a closing order may be obtained, where a house is not capable of being made fit for human habitation, against an owner or occupier without previously serving notice on him to abate the nuisance.

S. 32; 3 Edw. 7. c. 39. s. 8.

After closing order, there may be a demolition order; if owner fails to execute order, local authority may do the work.

S. 33, 34.

In the case of "obstructive" (i.e. preventing ventilation, etc.) buildings, on representation by medical officer or any four householders, local authority may give notice to owner; after hearing his objections, may order demolition of building. May purchase the premises and pull

**Note.*—The Housing of the Working Classes Act, 1885, is almost entirely repealed, but the following section (S.7) remains and is most noteworthy as a solemn invitation to local authorities to perform their duty:—

"It shall be the duty of every local authority entrusted with the execution of the laws relating to public health and local government to put in force from time to time as occasion may arise the powers with which they are invested so as to secure the proper sanitary condition of all premises within the area under the control of such authority."

+ But the powers of the Secretary of State may be assigned to the Local Government Board by Order in Council.

3. Edw. 7. c. 39. s. 2 (1).

* For definition, see preceding page.

down the building themselves, or allow owner to retain premises under conditions.

S. 38.

Procedure as to improvement schemes* for small areas.

Ss. 39.

4. As to the carrying out of duties of Local Authorities under the Housing Acts, and powers to enforce such carrying out.

As regards Part I. of the Act of 1890, the Local Authority are bound to act:—

(a) On the representation of the medical officer †.

S.4.

(b) On order by the confirming authority.

Such order may be enforced by mandamus—

S. 10; 3 Ewd. 7 c. 39, s.4 (1).

[†] As regards Part II. of the Act of 1890, the Local Authority are bound to act:—

(a) On the representation of the medical officer †.

S.30.

(b) As regards urban authorities outside London, on Order by the Local Government Board which is made binding on the local authority. S.31.

Note.—There is no provision for enforcing such Order, but as the Order is made binding on the local authority it would appear to be enforceable by mandamus.

(c) On information given in the course of inspection.

S.32.

(d) As regards "obstructive" buildings, on representation of medical officer, or of four householders.

S.38.

(e) If County Council, on default of action by Rural District Council or by Borough Council in London; no supervision, however, over boroughs elsewhere, and urban districts. S.45.

* In London outside the city in improvement schemes under Part II., the borough councils are the local authority ; under Part I., the county council.

+ The renewals of the appointment of medical officers of health who have not permanent appointments are by the Public Health Acts vested in the local authority, and the Local Government Board have no direct power of interference, though where a moiety of the salary is repayable out of the local taxation account, the approval of the Local Government Board to a new appointment is required. Where the medical officer of health is appointed permanently under the Local Government Board's approval he cannot be removed without the consent of the Board.

† This does not apply to the clearing of small unhealthy areas ; there does not appear to be any obligation on the local authority in this respect, unless they are themselves of opinion that action should be taken.

III.

The chief checks upon building in the case of new tenements are imposed in London by the London Building Act, 1894 (57—8 Vict. c. ccxiii—local), as amended by the Amendment Act, 1898 (61—2 Vict. c. cxxxvii.) ; elsewhere, by bye-laws adopted by the local authorities under the provisions of the Public Health Acts, except as regards a few towns which have Building Acts of their own.

A.—The London Building Act, 1894, is a long statute divided into sixteen parts, of which the following may be noted as referring more especially to checks on bad building.

Part VI.—Construction of buildings.

Part XIII.—Superintending architects and district surveyors.

Part XIV.—Byelaws.

Part XV.—Legal proceedings.

Under Part VI. may be found, *inter alia*, the following provisions.

As to thickness of walls—S.53 (and Schedule I.)

Fire-resisting materials for stairs and passages in tenements S.68.

Ventilation of staircases. S.69.

Height of habitable rooms. S.70. (1) (a) (b).

Windows. S. 70 (1) (c).

Part XIII. provides for the appointment, etc., of superintending architects and district surveyors.

On neglect by owner of notice given by a surveyor, the County Council may take proceedings. S.153.

Under Part XV. it is provided that the Summary Jurisdiction Acts shall apply for the purpose of legal proceedings under the Act. S. 166.

A tribunal of appeal is constituted, consisting of three members, one appointed by a Secretary of State, one by the Royal Institute of British Architects, and one by the Surveyors' Institute. S. 175.

A variety of penalties for different offences under the Act are given by S. 200.

B.—Building bye-laws under S. 157 of the Public Health Act, 1875, have already been mentioned.* These may be made by any borough or urban district council, and the power has been extended (slightly modified) to Rural District Councils by the Public Health Act, 1890. When Part III. of the Act is adopted, a Rural District Council can be invested by the Local Government Board with the full powers of an Urban District Council to make building bye-laws. One of the first duties of a local authority should be, and generally is, to make such bye-laws which have to be approved by the Local Government Board ; and the usual practice is to adopt bye-laws based on the "Model Bye-laws" which are issued by that Board. For a specimen of these see *Thompson*, pp. 85-92.

* See preceding pages.

APPENDIX V.

MEMORANDUM ON EMPLOYMENT OF MOTHERS IN FACTORIES AND WORKSHOPS.

By Miss A. M. Anderson, H.M. Principal Lady Inspector of Factories.

1. The main points for consideration are :—

I. The existing law, its means of administration, and its effects.

II. The extent and its effects in particular localities and trades, or generally, of employment of mothers of infants in : (a) Factories and Workshops under regulation ; (b) unregulated occupations of a kind comparable or likely to be equally injurious.

III. The circumstances and causes of employment of child-bearing women in occupations separate from their homes and the forces to be reckoned with if the existing law were to be strengthened or extended.

IV. The existing means and agencies, other than direct prohibition of employment, for enabling and fitting mothers to devote themselves both before and after confinement to the necessary care of the infant life.

V. Opinions quoted *re* amendment of the law.

I.—THE EXISTING LAW AND ITS ADMINISTRATION.

2. So far as the Factory Acts (which have hitherto aimed primarily at safeguarding the life and health of the worker herself or himself under a contract of employment with an occupier of a factory and workshop) are concerned, the existing law (1 Edw. vii., C. 22., S. 61) is, as it has been since the repealed Act of 1891 (Section 17) came into force, as follows :—That an occupier of a factory or workshop (or laundry since 1895) shall not knowingly allow a woman to be employed in his factory or workshop within four weeks after she has given birth to a child.

3. Thus no legal offence has arisen unless the occupier or his agent has, with knowledge of the fact and date of the birth, employed or re-employed the mother of the child. No responsibility has been laid on the father or mother in this matter by the Factory Act, and no means are prescribed to aid the employer of the mother in finding out the fact of the birth and its date, or ascertaining the physical fitness of the mother to resume work. The question of the physical fitness of the infant to be left by the mother has, of course, not entered into consideration. There are naturally many cases where knowledge of the fact and date of birth would be out of reach of cognisance by the occupier; for instance, where the mother herself changes her place of employment, and being under no legal obligation to state to the employer the date, or even the fact of the child's birth, commences a new contract of employment.

4. No case was taken under Section 17 of 1891 until six years after it had become law. In 1897 proceedings for a contravention were first instituted by one of the lady Inspectors in a Yorkshire town. On this case I reported to the Chief Inspector, Annual Report, 1897, page 96, as follows :—

" Hardly any infringement of the Factory Acts is more difficult to discover or proceed against than the employment of a woman within four weeks of her confinement, chiefly owing to the burden of proof resting with the inspector as to the employer's knowledge of the facts. Although we have good reason to believe that such employment occurs frequently in certain districts, only one clear case, namely, this one, has yet occurred within our knowledge as suitable for proceedings, and in this case it was owing to the fact that the woman was sent for by the foreman who was pressed for workers, on the ninth day after her confinement, although he had been informed of the reason for her absence on the day she left the mill. This unfortunate woman, although she made some attempt to screen her employers when called as witness by Miss Squire, was nevertheless dismissed from her employment after the result of the case (conviction and small penalty) was known. She

obtained employment from one of the magistrates who heard her case soon afterwards, and this removed her personal difficulties*; it would do little or nothing however, to counteract the effect on the workers' minds of the conduct of the employer, who, by dismissing her, showed his contempt for the law and the kind of course he was likely to pursue with any worker who admitted facts as to infringements of the law to one of H. M. Inspectors."

Miss Squire herself reported at the same time as follows :—

" Section 17, 1891, although of so great importance to the community, no less than to the individual, must remain for the most part a dead letter, owing to the difficulty of proving the employer's knowledge of all the circumstances, as well as for other obvious reasons. It is probable that much greater control over the evil with which this section is intended to cope could be exercised, and also that both the appearance and the reality of hardship entailed by the present regulation upon mothers dependent upon their earnings would vanish if the production of a medical certificate of fitness for employment in the particular factory to which it referred were made the condition of employment or re-employment after confinement."

In the case in question the mother of the infant had absolutely no choice but to take such work as offered, when and where she could obtain it, as she was unmarried and had no means of support.

5. Other cases have since them come before me for consideration, but until the present time in only two (both married mothers), after a considerable interval of time (in 1902 and 1903), has it been possible to institute proceedings for breach of the law. In four out of seven cases of employment in a factory within four weeks of child-birth, which have been reported to me during the present month, the legal cases fell to the ground because either the mother sought work in a fresh mill without mention of her infant, or having left her work some time before her confinement she returned after such an interval of time that the occupier was under the belief that the section had been duly observed. In the majority of these cases outside the section the mother is unmarried, or deserted and destitute. Three cases are about to be heard, two in Scotland and one in England, and the decision of the courts will be shortly accessible to the Committee.†

6. During the seven years that I have been directing the work of the lady inspectors, complaints have been received repeatedly of cases believed to be contraventions of the section as well as of general injury to the health of the mothers and infants through early, though not illegal, return to work. All have been thoroughly investigated, with the result, so far as prosecution is con-

* The industrial Law Indemnity Fund, organised by Mrs. H. J. Tennant, now affords support and assistance to find fresh employment in any case where a woman or girl is dismissed for giving true evidence on a contravention of the Factory or Truck Acts.

† I have just received the report on the decision of the magistrates in one case heard in Preston yesterday. There it was proved that the mother returned to work in the same mill within four weeks (reason, poverty, husband out of work), that the agent of the occupier, the foreman knew the reason for the woman's absence and that he sanctioned her return, omitting to ask her the age of the infant. The magistrates decided that the occupier did not "knowingly allow" the woman to be re-employed, although they blamed the foreman for not making the inquiry which would have elicited the fact of the infant's age.

cerned, already stated. On the other wider question, the evidence of doctors, nurses etc., has always been conflicting.

7. There can be no question that, while the prohibition is well known in factory districts, and absence for one month

fully observed in the majority of cases, especially where pressure of circumstances does not lead the mother to seek early re-employment and wages, there are yet many cases where the spirit if not the letter of the present law is broken. The following are cases found in one town in a single week's brief enquiry:—

Name.	Age.	Condition	Employment.	Date of Child's Birth.	Date of Return to Work.	Reason for Return.	DETAILS.
A.B.	24	Unmarried.	Jute Preparing.	11.2.04.	26.3.04. Change of mill.	Poverty.	Had to leave work, being unfit, seven weeks before confinement. Was in lodgings and became quite destitute, so went to work as soon as she found it possible. Worked before confinement in X Mill, and afterwards went to Y's, saying nothing of the baby. Earns 9s 8d. a week. The child's father contributed nothing.
C.D.	34	Married, but child illegitimate.	Jute Spinner.	29.2.04.	22.3.04. Change of mill.	No means of support.	This woman is married, but her husband has been in India (soldier) for seven years. She has two children aged eleven and seven years, who live with her husband's mother. She does not contribute to their support. The father of the child born this year went to Canada before its birth and has contributed nothing. She worked in Y's mill before confinement and started afterwards in X's, saying nothing of the child. She stated that she left off work "months before the birth" but would say nothing of how she supported herself then.
F.F.	32	Married.	Jute Spinner.	7.3.04.	22.3.04. Change of mill.	Poverty.	This woman's husband is a labourer. Had fairly steady work in early part of winter but none at all for the past two months or so. He left town when the child was a week old to look for work and has not been heard of since. Three children, the eldest a boy of fourteen working in a mill with 8s. a week, one under two years and the baby. The mother worked in P's Mill before confinement, went to H's after and said nothing of the baby. She tends a single frame and has 11s.—12s. a week. Her mother takes care of the children, living with her. They occupy a single apartment which was very dirty. Signs of much poverty. I had an interview with her Employer who will not employ her again until April 5th, when the four weeks will have elapsed. I saw the Inspector of the Poor on the woman's behalf and arranged for her to have some help.

8. It is hardly to be doubted that there would be a multiplication of such evasions of the prohibition if it were mechanically extended to three or more months without other amendments of the section tending to make administration more effective than it can be at present. Further, although the present limit of one month is (naturally) most willingly observed by all mothers with means of support, an extension to three months or longer would presuppose the introduction of a real change of practice amongst married mothers in a considerable number of cases (as will be seen by evidence presently to be offered). The consideration would then have to be faced, assuming the section to be made effective by throwing the onus of inquiry on the employer and declaration of the birth on the parents, whether the existing staff of inspectors would be adequate to enforce respect for the extension of the law.* One of the inspectors re-

porting for the purpose of this memorandum, indicates to me her belief that an extension of the time limit must influence to some extent the marriage and birth rate, and another, while approving further restriction, says, "I realise thoroughly the dangers attached to the restrictions, and that increased vigilance would be necessary on the part of other authorities."

9. In view of the difficulties of administration in England of the four weeks' limit, reference should be made to the law in other industrial states of Europe although it would be impossible without careful enquiry on the spot to ascertain how far either by local custom or by methods of administration, the law in those countries is realised in practice.

10. The limitations as regards employment of women after child-birth may be briefly summarised as follows:—

"Belgium:—'Women must not be employed in industry within four weeks after child-birth' (section 5 of the Law of 5th December 1889.)

"Switzerland:—'A total absence from employment in factories of women during eight weeks before and after child-birth must be observed, and on their return to work proof must be tendered of an absence since the birth of the child of at least six weeks' (section 15 of the Federation Law of 23rd March, 1877). An order of the Federal Council, 1897, indicates a further abstinence from employment before confinement (the length of time unspecified) in certain dangerous occupations, e.g., in processes in which fumes of white phosphorus are produced; or in manipulation of lead or lead products; or where mercury or sulphuric acid are used; in dry cleaning works; in india rubber works; any processes involving lifting or carrying heavy weights, or risk of violent shocks. As the limit of the period is undefined, and means of enforcing the prohibition unspecified, it is difficult to see how the regulations does more than outline an excellent theoretical protection.

"Holland:—'Women must not be employed in factories or workshops within four weeks after child-birth.' (Law of 5th May, 1899.)

"Denmark:—'Women must not be employed within four weeks of child-birth except on production of a medical certificate showing that the mother's employment will not be injurious to herself or the child.' (Law of 1st July, 1901.)

"Germany:—The industrial code contains the same prohibition absolute of employment during four weeks as the Dutch Law, but extends it to six weeks if a medical certificate cannot be produced approving employment at the end of four weeks.

"Austria:—The Industrial Code lays down the same prohibition as the Dutch Law.

"Spain:—By a law of the 13th March, 1900, prohibits employment of women within three weeks of child-birth, but lays a further obligation on employers to allow one hour at least in the ordinary period of employment (for which there must be no deduction from wages) to nursing mothers to nurse their infants. This hour may be divided into two separate absences of half-an-hour, and may be fixed at pleasure by the mother, whose only obligation is to notify the time she chooses to the overseer."

Quoted from "Dangerous Trades" (Comparative Survey of Legislation), edited by Thos. Oliver, M.D., etc. Published by John Murray, 1902. pp. 53-54.

II.—EXTENT AND EFFECTS OF THE EMPLOYMENT.

11. The extent of employment of mothers in (a) regulated and (b) unregulated work of a comparable kind can only roughly be arrived at by considering the census returns with special reference to the particular centres of women's main industries, and above all those centres where at the same time men's industries for the same class are lacking or scarce. The occupiers' returns for factories and workshops give no information as to the proportion of married women; and the inquiries of inspectors on this point in individual factories have to be made with great care and discretion in the absence of direct legal right (where section 61 is not in question) to make such inquiry. The Registrar's records of births and of deaths, which might be invaluable in throwing light on this important question of the occupations of mothers of young children and infants, show only in the case of illegitimate infants the occupation of the mother. The value of the information in this case makes it appear the more regrettable that a record which could have been so easily obtained has not been kept of the occupation of married mothers, and of mothers of still-born infants at the cemeteries and workhouses. (It may be noted in passing that attention was drawn at the International Congress on Hygiene in Brussels, 1903, to the lack of any general records of still-births in great Britain, and the consequent difficulty of comparing the figures as to infant mortality with those for other countries of Europe.) In certain towns, of which Preston, Bury, and Leeds may be named (although there are others), information on the occupations of the mothers of infants dying under one year of age is, or shortly will be, available in a certain number of cases, as the result of inquiries instituted through lady Sanitary Inspectors or

Health Visitors by the Medical Officer of Health. In Blackburn a valuable voluntary record has been kept by the Registrars for the use of the Medical Officer of Health, of the occupations of the mothers in the case of all births and Miss Squire has drawn from this record an interesting table to which I refer presently.

12. As regards the effect of employment of mothers in factories, workshops, laundries, or as charwomen or in similar hard work away from home or in heavy domestic work at home, no general information, so far as the health of the mothers themselves is concerned, of a statistical kind is available*; particularly is such information incomplete in some of the centres selected for this memorandum (on account of the unusual proportion of married women in factories), for there it is reported to me (especially by Miss Squire for Blackburn, Preston and Burnley) that there is no lying-in hospital, that maternity cases are not taken in at the infirmary, and an insignificant amount of charitable assistance otherwise afforded.

13. "The workhouse is the only institution where patients are admitted for their confinement and here they are of course destitute cases." Enquiry has to be made at length of physicians and surgeons, nurses and midwives in such districts. As regards the effect on the infants, much may be learnt from the comparison of local and general infantile mortality rates, with particular reference to (a) presence (b) absence of much employment of mothers, if careful local enquiry be at the same time made as to presence or absence of other recognised causes of high infantile mortality (insanitary surroundings, ignorance of maternal duties, intemperance, poverty, use of means of prevention of child-bearing). The mere fact of extensive employment of mothers in factories in a locality cannot be regarded as significant by itself without reference to the factors of length of hours, character, and condition of the work itself (which vary enormously from one industry to another) and to the ordinary standard and practice of the mothers in the district as to care of infant life.

14. The enquiry of three inspectors on my staff has been during a few weeks directed towards increasing in three main centres, viz., Dundee (jute trade), Preston, Burnley and Blackburn (cotton trade), Hanley and Longton (pottery trade), our available knowledge of the above indicated extent and effects of employment of mothers, adding consideration of the moral and economic effects as well as of causes of such employment. Two characteristic conditions all these towns have in common: (1) presence of a large concentrated industry necessarily employing many women and with a large proportion of married women amongst them; (2) absence of other important occupations for women. Two of these towns, Dundee and Preston, have a characteristic absence of or insufficiency of industrial employment for men of the same class as those of the women employed. The three Lancashire towns stand apart from the other towns named in respect of the comparatively high standard of living established and deemed essential by the workers in question. Serious struggling poverty in the ordinary sense which is prominent in parts of Dundee and in parts of the pottery towns is generally absent in the Lancashire towns. In all these towns the infantile mortality is high, although as regards some of the towns equally and almost equally high rates are elsewhere to be found where the industrial employment of mothers is not a special feature or where the mothers mostly remain at home. In all of the towns a very striking degree and amount of ignorance of maternal duties, especially of feeding and cleanliness, is at once evident, but the general sanitary conditions in the matter of housing and surrounding sanitation vary widely. Other widely varying conditions are seen in the nature of the work of the factories, in the length of hours, pressure and speed of work, heat, dust, and other sanitary conditions.

EXTENT AND EFFECTS.

15. Turning now to the extent of employment of married women and mothers, it is convenient to bear in mind the general extent of such employment as shown in the census

* Except such as might be indicated through careful comparison of the ratio of mortality from special women's diseases to the female population in selected districts. No idea would be given of the amount of illness, nor could it be precisely stated from existing records which occupations were concerned.

1901. This information is given only for England and Wales, not in the census reports for Scotland and Ireland. In England and Wales more than two thirds of the married or widowed women employed in occupations are to be found in the following groups:—(a) Domestic offices, including all laundry workers and charwomen; (b) textiles; (c) dress. The highest ratio of married women

is among the laundry workers, whose trade is very little regulated; taking those two branches together, while the total number of women over ten years employed is less than half that in the textiles groups, yet actually a larger number (absolute, not relative) of married women are employed than in the textile group. The details are shown in the following table:—

OCCUPATIONS OF WOMEN. FEMALE POPULATION OVER TEN YEARS IN ENGLAND AND WALES. CENSUS 1901.

	Unmarried.	Married or Widowed.	Total Female Population, Occupied.
A.—All Occupations	3,254,242	917,509	4,171,751
Unoccupied	2,971,399	6,046,435	9,017,834
B.—1. Domestic Offices or Services	1,378,156	312,566	1,690,722
(a) Charwomen	25,378	86,463	111,841
(b) Laundry Work	86,474	109,667	196,141
2. Textile Fabrics (includes dealers)	518,252	144,970	663,212
3. Dress (includes dealers)	553,485	157,476	710,961
4. Bricks, Pottery, Glass	23,947	9,201	33,148

The ratios, however, are not the same when we come to consider selected districts.

LANCASHIRE.

	Unmarried	Married or Widowed	Total
(A) All Occupations	527,400	166,691	694,091
Unoccupied	327,269	770,886	1,098,155
(B) 1. Domestic Services Total	118,918	30,946	155,864
(a) Charwomen	4,328	13,924	18,252
(b) Laundresses	6,739	7,500	14,239
2. Textiles	232,873	74,010	306,883
Preston	12,339	5,313	17,652
Blackburn	15,501	8,368	23,869
Burnley	10,697	6,000	16,697
3. Dress	70,703	16,692	87,395
4. Bricks, Pottery, Glass	1,257	302	1,559

STAFFORDSHIRE.

(A) All Occupations	104,230	30,733	134,963
Unoccupied	107,248	227,907	335,155
(B) 1. Domestic	35,502	6,402	41,904
(a) Charwomen	604	2,125	2,729
(b) Laundresses	1,342	1,863	3,205
2. Textiles	4,953	1,503	6,456
3. Dress	15,742	3,681	19,423
4. Bricks, Pottery—Total	14,711	6,537	21,248
In Hanley	3,306	1,412	4,718

16. Looking further into the census figures for Blackburn, Burnley, Preston, it appears that more than half the women over fifteen years of age in the cotton mills of Blackburn and Preston are married or widowed, whereas less than one third are so returned for Burnley. In Blackburn, 31,445 women were returned as occupied (out of 68,660 females), of these 20,906 were in cotton mills; in Preston 25,279 women were returned as occupied (out of 51,669), and of these 16,317 were in cotton mills. Miss Squire estimates that of the total number of occupied women in Blackburn, 37·9 per cent. are married or widowed as compared with 30·5 in Preston and 33·5 in Burnley. I have not been able yet to work out all the corresponding percentages for the Pottery towns, but Miss Martindale gives the following estimate of the percentage of married and widows in china and earthenware factories to the female population between eighteen and fifty years of age:—Longton, 20·6; Hanley, 9·7; Fenton, 14·0; Burslem, 13·6; Tunstall, 9·6; Stoke, 7·1.

17. In Dundee, which in population takes the third place among Scottish towns, and where a larger proportion of occupied females is found than any of the others, the chief employment for women is the manufacture of jute. As the census gives no information about married women the only way of arriving at any estimate is to glance at the figures as to all women occupied, 57·7 per cent.* out of 72,723, at the total number employed in jute mills, 24,879, of whom 13,719 are between twenty and forty-five years of age, and then to proceed, as Miss Paterson did, to take particulars in a group of mills. She says:—

* Paisley follows second with 43·4 per cent.; Edinburgh third with 43·3 per cent.; Glasgow fourth with 38·9 per cent.; Aberdeen fifth with 35·4 per cent.

"I visited a group of mills in the north east quarter of the town. These may be taken as representative.... I found it best to make my inquiries personally in the mills, the foremen do not know which women are married and which are not, and they cannot be relied on to get the information correctly from the workers who in one mill where the attempt had been made found great pleasure in giving absolutely misleading information. I, therefore, visited for the purpose twelve jute mills, in which a total of 3,269 women over eighteen years of age are employed. In this way I got information at first hand with regard to the married women, but not the unmarried mothers. In almost all cases I got the information I asked for as to numbers and ages of children and the provision made for them during absence at work, but there was, of course, much greater readiness on the part of some women to give details than was shown by others. On the whole, however, the difficulty was not to get information... but to avoid giving hastily the advice so eagerly sought for... I found that the managers generally were of impression that they employed more married women than I found they did, but they no doubt included the unmarried mothers."

18. In order to estimate the extent of employment of unmarried mothers, Miss Paterson searched the Registrars' books for details of occupations of mothers of illegitimate infants in 1903. Out of 4,024 births, 400 were illegitimate, and in 278 of these cases the mothers' occupation was given as textile operative. Many of these cases Miss Paterson visited in their homes as well as many of the married mothers. She found that in the majority of the cases no contribution towards support was made by the father of the illegitimate child.

19. Miss Paterson's details about the 12 Jute Mills may be summarised as follows:

	Women over 18 Employed.	Married.	Widowed.	Separated or Deserted.	Over 45.
Mill I.	36	15	5	4	2
(Total number of Children, <i>living</i> 51, <i>dead</i> 17, eleven in infancy.)					
Mill II.	122	28	4	—	3
(Total number of Children, <i>living</i> 77, <i>dead</i> 27, fifteen in infancy.)					
Mill III.	259	36	21	7	7
(Total number of Children, <i>living</i> 90, <i>dead</i> 37, thirteen in infancy.)					
Mill IV.	243	59	20	10	16
(Total number of Children, <i>living</i> 129, <i>dead</i> 64.)					
Mill V.	92	38	7	6	45
(Total number of Children, <i>living</i> 70, <i>dead</i> 54, forty-two in infancy.)					
Mill VI.	109	34	14	9	13
(Total number of Children, <i>living</i> 84, <i>dead</i> 63, fifty-one in infancy.)					
Mill VII.	274	74	9	10	12
(Total number of Children, <i>living</i> 121, <i>dead</i> 23.)					
Mill VIII.	108	25	6	3	6
(Total number of Children, <i>living</i> 45.)					

	Women over 18 employed.	Married.	Widowed.	Separated or Deserted.	Over 45.
Mill IX.	250	66	17	12	8
(Total number of Children, <i>living</i> 157, <i>dead</i> 59, forty in infancy.)					
Mill X.	323	47	16	6	14
(Total number of children, <i>living</i> 94, <i>dead</i> 21)					
Mill XI.	1,130	178	65	24	65
(Total number of Children, <i>living</i> 358.)					
Mill XII.	323	62	17	10	6
(Total number of Children, <i>living</i> 148.)					
Totals	3,269	662	201	101	197

20. As the census figures distinguish the ages from fifteen, twenty, twenty-five, etc., and all the factory regulations and returns distinguish those above and below eighteen years of age, comparison of the two sets of figures for percentages is not satisfactory. A rough estimate, however, may be made for purposes of comparison with the figures given above for cotton mills in Preston and Blackburn that one-fourth of the women employed in Dundee jute mills are married or widowed.

21. It is impossible, as already pointed out, to make any statistical comparison as regards numbers of mothers of young infants employed in the mills (although, as I shall presently indicate, the inspectors have gathered much scattered information bearing on this point). For Blackburn alone have we got the general figures as to births presented in the following Tables by Miss Squire for the year 1903:—

BLACKBURN.
Births registered in 1903 with Mothers' occupation.
Total Births.

Cotton Operatives.	Weaver.	Winder.	Warper.	Rover.	Slubber.	Drawer.	Ring spinner.	Mill hand.	Total.
	805	123	25	74	12	25	54	28	1,146
Servants	-	-	-	-	-	-	-	-	20
Charwomen	-	-	-	-	-	-	-	-	11
Other Occupations	-	-	-	-	-	-	-	-	69
Housewives	-	-	-	-	-	-	-	-	2,042
Total	-	-	-	-	-	-	-	-	3,288

22. Most unfortunately, this interesting information cannot be brought directly to bear on the problems before us, through lack of parallel information as to the occupations of the mothers in the case of infant deaths. The influence of occupation can only be guessed at by the particulars afforded in the next two tables as regards illegitimate births, and deaths of illegitimate infants under one year in Blackburn during 1903; the figures are so small that too much weight must not be attached to the relative infant mortality. When it is remembered, however, how much higher the infantile death rate is amongst illegiti-

mate children generally than amongst legitimate, and that the general rate in Blackburn ranges from 157 in 1902 to 221 in 1900, it is seen that the death rate shown in the second table affords no positive ground for attributing a specially high rate to the cotton mills alone. A similar observation has been made by the Medical Officer of Health for Bury in his report for 1902, after a systematic inquiry made into the occupation of the mother of every infant dying within the year within his borough; in that inquiry the basis is broader than in the following Tables.

BLACKBURN.
Illegitimate Births.

Cotton Operatives.	Weavers.	Winders.	Warpers.	Rovers.	Slubbers.	Drawers.	Ring spinners.	Mill hands	Total.
	50	15	1	7	—	—	10	10	93
Servants	-	-	-	-	-	-	-	-	20
Charwomen	-	-	-	-	-	-	-	-	7
Other Occupations	-	-	-	-	-	-	-	-	8
Housewives, or no occupation	-	-	-	-	-	-	-	-	7
Total	-	-	-	-	-	-	-	-	135

BLACKBURN.

Deaths of Illegitimate Infants under one year.

These figures are for two registration districts only, *i.e.*, north and south. Witton registration district is omitted owing to not being able to go to the registrar's office. This table is, therefore, incomplete. But there was only one illegitimate birth registered in the Witton district, a servant's child.

23. The parallel figures for Preston and Burnley follow in the next two groups of Tables:—

PRESTON.

Illegitimate Births.

For first-three quarters of year 1903, viz., Jan. 1st to Sept. 30th.

	Total Births.	Illegitimate.	Occupation of all others.				
			Cotton.	Domestic Servants.	Char-women.	Other.	Unoccupied.
Town of Preston	2,518	117	77	21	4	12	3
Districts of Broughton and Alton (chiefly rural)	461	4	2	1	1	—	—
County Boro' of Preston	2,979	121	79	22	5	12	3

Deaths of Illegitimate Infants under 1 year.

Jan. 1st to Sept. 30th, 1903.

	Total Deaths Under 1 year.	Illegitimate.	Occupation of all others.				
			Cotton.	Domestic Servants.	Char- women.	Other.	Unoccupied
Town of Preston	332	23	16	3	1	1	2
District of Broughton	44	*15	10	3	—	1	1
," " Alton							
County Boro'—Total	376	38	26	6	1	2	3

* 11 of these in Workhouse.

BURNLEY.

Illegitimate Births—Year ending December 31st, 1903.

	Total Births.	Illegitimate.	Occupation of Mother.				
			Cotton.	Domestic Servants.	Charwomen.	Other.	Unoccupied.
County Borough of Burnley -	2,857	167	128	11	5	19	4

Deaths of Illegitimate Infants under One year—Year ending December 31st, 1903.

	Total Deaths under One year.	Illegitimate.	Occupation of Mother.				
			Cotton.	Domestic Servants.	Charwomen.	Other.	Unoccupied.
County Borough of Burnley -	606	65	45	8	2	8	2

24. The results as regards the one point of infantile mortality in relation to occupation are in this present inquiry similar to those I have had reported to me on isolated inquiries in the past. For example, in 1898 complaint was made to me that among the infants of hearth rug weavers in and near Huddersfield (a very rough type of workers), an excessively high mortality occurred; it was alleged to be at least 50 per cent. All the factories were visited by Miss Squire, and close investigation made as to the ratio of mothers among the weavers, condition of the infants, time before and after confinement for leaving work; registers were searched, doctors and midwives, employers and others interested consulted. A considerable proportion of the mothers were unmarried, but no definite relation between the occupation and the infant mortality could be established. The alleged mortality of 50 per cent. was certainly not supported by the facts discovered. Although the industry and the figures are small the investigation was of interest, as knowledge can only be gained by successive consideration of all the facts in definite selected areas and industries. Although it is certain that the rate of infantile mortality is only a very rough guide (if any) to the effect (which is moral as well as physical) of the mother's occupation on the health of her surviving children, it is of the utmost importance that we should be able to follow the clue further than with existing records we are able to do.

25. Two directions in which information is lacking which we need are: (a) localisation of the infant mortality rates in a systematic way for particular areas in industrial towns where the workers of selected industries live; (b) general infant mortality rates for selected industries throughout the country.

26. (a.) As regards the first of these points, a comparison of the rates in the special centres I refer to with those for non-industrial towns and counties would show what I mean. Dundee with 57·7 per cent. occupied women (and about one-fourth of the women in the jute mills married) has an infantile mortality rate varying from 217 in 1893 to 142 in 1903 (average during representative years 1890 to 1899 is 179). Glasgow with 38·9 per cent. occupied women had rates varying from 149 in 1901 to 134 in 1903, but in the Brownfield district the rates run far higher (242 in 1901, 233 in 1903, much beyond any localised rate in Dundee).

The whole of Scotland with 37·26 per cent. occupied women has a rate of 129·3.

Hanley with 35·8 per cent. occupied women, and 19·8 per cent. in the potteries (of whom 5·9 per cent. are married) has an average mortality rate of 204 (209 in 1900, 212 in 1901, 170 in 1902).

Longton with a rather larger percentage of women and of married women occupied * has an average infantile mortality rate (ten years) 239 (255 in 1900, 225 in 1901, 195 in 1902).

Throughout Staffordshire the average rate over ten years is 172 and 1901 fell to 164.

We may compare some other counties where there is far less industrial employment for women:

Durham average: 167, risen in 1901 to 179.

Northumberland: 160, risen in 1901 to 182.

South Wales: 163, risen in 1901 to 170.

Returning to the county of Lancashire, we find that the infantile mortality rate has remained practically stationary for eleven years, and was 179 in 1901 (average for ten years previously: 179).

* The exact figures on which to calculate percentage are not published, but could be obtained from the Registrar General if needed.

Preston with nearly half its female population "occupied," of whom about two thirds are in cotton mills, has an average infantile mortality rate (ten years to 1900) of 236; 30·5 of the total occupied females are married, and of women over 15 years of age in cotton mills one half are married.

Burnley with a larger proportion of its female population in cotton mills, has an average infant death rate of 210, fallen in 1902, an exceptional year, to 177; 33·5 of the total occupied females are married, and of women over 15 in cotton mills rather more are married than is the case in Preston. This is in a town where Miss Squire found far more ignorant neglect of infants than in Preston.

Blackburn with nearly a half of its female population "occupied," under a third of whom are in cotton mills, has an average infant death rate of 200: 37·9 of the total occupied females are married, and of women over 15 years in cotton mills over two-thirds are married.

From this rough outline it is clear that much more localised information with reference to sanitary surroundings in selected areas is necessary before we can definitely connect the infant death rate with the occupation.

27. (b.) As regards the second point (above indicated) on which I think there is great need of fuller information, and for which records are now lacking, it seems sufficient to point to the fact, that in the great occupations for married women as laundresses and charwomen, it is at present quite impossible to arrive at either the infantile death-rate or the birth-rate. This is the more regrettable because in several very important features, such as excessive temperature, humidity, over-pressure, straining nature of parts of the work, the influences likely to be adverse to child-bearing women, are found as much in the laundry industry as in the cotton industry. Both these industries of laundry work and charring are naturally refuges for semi-skilled or unskilled working women pressed out of other trades.

28. It has been impossible with the limited staff available to attempt any personal inquiry into the question of the extent and effects of employment of mothers in laundries, though much that would throw light on the whole problem would doubtless be found by such inquiry in West London (especially Acton and Hammersmith), South London and Brighton, and other watering places.

29. As regards the physical conditions to which the women are subject in the various industries under review, reference made to the table of hours of legal employment (already furnished to the Committee) will show the daily and weekly limit of hours permissible. Although legally more hours may be worked in the pottery processes than in textile processes, actually far shorter and easier hours obtain in many non-textile factory processes (but particularly in earthenware and china works), than in either cotton or jute mills. The highly organised conditions, and extraordinarily costly, specialised machinery in these textile trades mean first a far greater pressure as to output, secondly, more heat and noise, often more difficulty as to ventilation; further either dust or humidity is inseparable from certain of the processes.

30. As to the general effect of these conditions on the health of the women and their children, Miss Squire for Lancashire, and Miss Paterson for Dundee report similarly:—

"That it is the employment of women from girlhood, all through married life, and through child-bearing that impresses itself on the mind . . . that it is useless for any medical men and others not familiar with the conditions of mill life there to pronounce any opinion on the effect of factory work upon the mother and infant; they have no

conception of the stress and strain and of the general conditions of life and work in these mills."

31. Miss Paterson expressly points repeatedly to cases showing that it is the stress and strain of the work, and the necessity of maintaining a high standard, coupled with decreasing physical capacity of the child-bearing woman under such conditions that generally determine the moment when the manager in a jute mill sends her home; sometimes (as in one of the cases under Section 61 about to come before the magistrates), the woman is sent away to go into another equally unsuitable occupation as charwoman or house-scrubber or as a home sack-sewer. Sometimes a neighbour will take the place in the mill of the woman who has been sent home on account of her physical inability to maintain her output, in return for her taking charge of that neighbour's children for a small sum.

"How they live during the period of absence is a mystery, but I find that the tradesmen give credit to a surprising extent, and rents are allowed to get much into arrears. . . . Great harm is done and suffering occasioned to the women by their remaining at work too long before confinement, as well as by their returning too soon after it. Factory managers, doctors, health visitors, and workers themselves are agreed that the four weeks' absence is often shortened to three or even less. I have found that a considerable number of the mothers nurse their babies regularly

and continue to do so, but this natural food is always supplemented by other given without knowledge."

32. Miss Paterson personally investigated the cases of 267 mothers of young children employed in the mills, but feels that the information given by them as to precise length of time away from the mill is not sufficiently reliable to be tabulated. As to the effects on health, moral and physical, both of the mothers and children, she was able to form very definite ideas of the excessive and injurious strain on the mothers and of the lack of sufficient care of the children. Visits on Saturday afternoons to the homes showed that any energy that was left over by the week's work in the mill was spent by the mother in family washing and house-cleaning, but dirt and discomfort abounded, and she "never saw any attempt at cooking." She sends me particulars of 144 cases where the health visitors recently found two, three or more very young children left alone in the house (in some cases locked in), while the mother was at the mill, with only such food as the mother could prepare overnight or in the early morning before leaving. Definite arrangement with another woman to take charge of the children seems far less common in Dundee than Miss Squire found in Lancashire, or Miss Martindale in Hanley and Longton.

33. Miss Squire and Miss Martindale send me information, but incomplete, of the time of leaving off work before and after confinement. The former tabulates the information in the case of Preston as follows:—

PRESTON.

Time of leaving off work before, and of resuming work after Confinement in the case of 124 women employed in the Cotton Mills.

Before.						After.						
Under 1 week to 14 days	Under 14 days	1 month to 2 months	2 months to 3 months	3 months to 6 months	6 months to 9 months	Before 1 month	1 month	5 weeks to 2 months	2 to 3 months	4 to 6 months	6 to 12 months	Not returning
14	7	35	22	36	10	2	12	26	42	34	6	2

34. Miss Squire believes that the usual practice is for the mother, particularly if a weaver, to return to work directly the child is four weeks old, or as soon as she can obtain employment; that although in the last twelve months the majority of women remained absent two to three months, slackness of trade and difficulty in obtaining employment was given as the reason. Two of the doctors with whom Miss Squire conferred in Preston attributed the large number of premature births to continued work in the mill during pregnancy, and all considered that an exceptional number of cases of uterine trouble existed and was attributable to too early return to work. For reasons already indicated there is no centralised source of statistical information about such cases among cotton operatives. The doctors in Blackburn mention that the evil of employment of women during pregnancy is aggravated by their desire to earn as much as possible during the time before they are forced to give up work. Miss Squire herself received complaints from the women of the hardship of being discharged by the manager four or five months before confinement. She found that it was the general practice of the Preston women to nurse their babies at meal times, and before and after the day's work in the mill. In Burnley this, she found, was exceptional, while greater ignorance and unintentional cruelty in the giving of unsuitable food to the infant seemed to be common.

35. Turning to the conditions and effects in Hanley and Longton, Miss Martindale reports on the large proportion of women employed in what may be termed light work such as gilding, painting, burnishing. Many are, however, employed in "fairly arduous" work in hot and dusty surroundings. In none of the processes are the hours so long as in textile districts, seldom exceeding, often less than, the limits of 8 or 9 a.m. to 5.30 or 6 p.m.

(less one and a half hours for meals). In many cases women are employed not more than four or five days a week, and intervals of easy leisurely work are possible where so much is done by hand. The usual practice is to continue work until within a few weeks of child-birth; in a third of the cases questioned Miss Martindale found absences of from five to twelve weeks beforehand. More than two-thirds of the women questioned returned to work six weeks or longer after childbirth. In one case only was return found to have taken place before the four weeks' limit. Miss Martindale found that in all the cases she investigated the women were doing their housework at the end of two weeks. For the same reason as in the Lancashire towns (lack of maternity hospitals or charities) little systematic information as to the immediate effect on the mother's health is to be had. Miss Martindale conferred with doctors and interviewed district nurses and midwives, and found little evidence of ill results. She found, however, that 38.4 per cent. of the children born to the mothers she questioned had died in infancy; this she attributed to improper feeding due to "appalling ignorance and objection to being taught." Even though partial nursing by mothers of their infants is general (and only one-seventh of the comparatively small number of cases investigated was the feeding entirely natural) an almost complete absence of cow's milk by way of supplement was noted. "Boiled bread with butter and sugar" and arrowroot biscuits seemed to be the usual supplement to the mother's nursing. The undersized, unhealthy appearance of the children that survive infancy, and the large number of cripple children in pottery towns Miss Martindale traces to diet of the kind named. She traces the larger number of cases of death from respiratory diseases and bronchitis among infants to the habit of overheating dwelling and bedrooms. Coal is cheap in the district and the workers

are accustomed to high temperature in the workrooms. Infants are taken without any extra clothing from overheated, ill-ventilated rooms to the doorstep by mothers as well as the paid nurses who are somewhat systematically employed. Miss Martindale made inquiry as to the methods of the nurses among competent observers (including the Inspector for Prevention of Cruelty to Children) and the lady sanitary inspector), and could not hear that they took less care of the children than the mothers.

III.—CIRCUMSTANCES AND CAUSES OF EMPLOYMENT OF MOTHERS.

36. The circumstances under which the mothers leave their infants and young children to go to the mill or factory have already partly appeared under I. and II. above.

All three Inspectors have systematically directed their inquiries towards making clear the reasons which prompt early return to work after confinement as well as late continuance at work before confinement.

(1) Classification.

37. I classified for their inquiry the possible reasons thus:—

- (i) Death of the father or lack of employment, or insufficiency of the father's wage.
- (ii) Desertion by the father.
- (iii) Fear on the mother's part of the loss of future work in the factory.
- (iv) Preference for factory over domestic work.

Some of these reasons themselves would be effects of a concentration of a women's large industry in a district where there is absence of men's occupations, such as is spoken of above. In so far as they are effects of large economic and social causes, not immediately alterable, attempted mitigation of the results of employment rather than attempted diversion on any large scale of the employment of mothers appears most likely to prove effectual, and to be attended by fewest counterbalancing disadvantages.

(2) Summary of Causes in Cases observed.

38. In case of each mother visited the Inspector has noted in schedules (giving also other circumstances) information obtainable as to the reason for continuing and returning early to work in the mill. In the great majority the case falls under one or other of the three points in Class (i). In Dundee Class (ii) shows itself frequently. Classes (iii) and (iv) appear least of all. Detailed evidence can be given by the inspectors.

(a.) Dundee.

39. Miss Paterson says that when she drew the attention of mothers, who had returned within four weeks to work, to the law, they—

"Admitted that they knew, but asked helplessly 'what could they do?' Poverty was in all these cases the reason for the early return, and that is practically the only reason in Dundee . . . due to one cause or another, for fear of loss of work does not affect the mill operative there; if she does not get back to her own place there is so much irregularity of employment that her chance at a gate is quite a good one, and for some years there has been no difficulty in finding work. In reply to my enquiries as to absence before confinement, I found that only one of the six cases of return within four weeks after confinement had not been absent at least a month before; while there are exceptions, this is much what I have found general amongst the mill-workers. . . . They leave less often on their own initiative than because they are sent away to make room for a more efficient worker."

(I have already quoted Miss Paterson's experience that this dismissal in Dundee often means merely transference to another occupation, say as "scrubber.")

"There has been a great scarcity of employment for men recently in Dundee, but unwillingness to work must in some cases be a reason for the man's idleness; 'slackness' was, except in a very few cases, the reason given by the woman. . . . Of the

mothers of illegitimate children seen, I only found one who had been since married to the father of the child, and in most cases no contribution was made by him. It is not surprising that an early return to work seems to the mother a necessity in these instances. . . . Very little preference for the mill to the home was expressed among the women, the few who said they were dull at home were women without any children . . . in a number of cases the worker has said of the relative or neighbour who looks after her children: 'She can keep them better than I can, she has not been brought up in the mill.' . . . There is little employment for men in the mills, a certain number of labourers and carters are employed at wages from 14s. to £1. Assistant overseers do not get more than £1, and a great deal of labouring work in the mills as well as in the boat yards is paid at from 15s. to 17s. a week. . . . Womens wages, in the preparing processes, are from 9s. 6d. to 12s. a week; spinners earn 11s. to 15s.; winder's and warpers about 15s.; weavers, 16s. to £1. . . . When a man and his wife are working in the same mill, as they so often are, the woman is probably earning the higher wage. The Inspector of the Poor in Dundee stated that the past winter has been a very bad one for working men. The shipyards have been practically idle, the building trade, after great activity, almost dead, and there has been a long strike amongst engineers. . . . Not only skilled workmen but labourers, whose earnings do not exceed £1 a week, were out of employment. It is the latter class who become the husbands of the millworkers, when these do not marry in the mill, and any 'slackness' of work soon renders them destitute."

(b) Preston.

40. Preston resembles Dundee, but is even more striking in scarcity of employment for men. There are no iron works or collieries, as there are in Blackburn and Burnley. Miss Squire says:—

"The men are said to look out for a wife who is a four-loom weaver, and they have the reputation of being lazy."

Miss Squire herself found that the husbands of cotton operatives visited were chiefly employed as labourers in intermittent work, while "in all cases where the husband was in regular employment as weaver, platelayer, painter, bricklayer, etc., the one wage was insufficient to keep the family in the standard of life they expect."

41. In the textile mills nearly twice as many women are employed as men. Ring spinning, in which women are employed, is being gradually substituted for mule spinning in which men work.

"One large firm, employing 1,442 women, told me that . . . being unwilling to turn the men out of employment they had offered to teach them ring-spinning and then give them the same wages as on the mules . . . the men tried it for a time and then gave it up. . . . Except for heavy work such as sheetings, where the weavers are entirely men, women are preferred as weavers. The men seem to look down upon the occupation for themselves. The wages for weavers are the same whether men or women."

42. In one-third of the cases of early return to the mill investigated by Miss Squire in Preston, the reason was poverty due to insufficiency of the father's wage, and in two-fifths of the cases it was due to that and lack of employment combined. In three cases visited the mother was unmarried. In only one case was preference for mill-life expressed by the mother. The wage of the husband found to be insufficient in the cases investigated ranged from 16s. to £1. The wages of the wife, if a weaver, range from 20s. to 25s. net, if a ring-spinner, from 18s. to 25s. (recently on short time the wages have been less). While the medical men advocated, in speaking to Miss Squire, a three months' absence at confinement, both on account of the mother and the child, they considered it would be impracticable to enforce it, as the mother was in most cases "the chief wage-earner." Miss Squire visited, amongst the others, nine mothers of young infants, who were doing their best to remain at home for a time, but some of these feared they would have to go back to the mill soon. Miss Squire says:—

"I do not think that in Preston an extension of the legal time during which a mother is compelled to remain away from the factory after confinement would tend to diminish the employment of married women, and this opinion is that of trade union secretaries."

43. I am much struck in Miss Squire's notes on Preston by the number of times (as contrasted with Dundee) the entry appears, "nice, clean, comfortable home," "superior, tidy home and persons," and by the much rarer cases of illegitimate births. Even in those cases the standard of living appears higher, as may be seen from the following:—

"E. B.—Single, weaver, young, neat, nice-looking girl in tidy home, with parents. Baby aged ten months, healthy looking. Left work six weeks before confinement and does not mean to leave baby yet."

44. The number of illegitimate births, while far below that of Dundee, shows much less unfavourably than there the character of the people, because subsequent marriage of the parents is frequent in Preston. Another significant point in Miss Squire's notes is that the high infant mortality occurs where the number of children born to the mother is large and in rapid succession. The following is a typical case:—

"Mrs. B.—Husband a labourer, herself a weaver with 18s. a week. Has had thirteen children very quickly, buried nine. Baby seven weeks old out to nurse (visited, clean and neat). Breast-fed at meal-times, milk and water between. Premature birth at seven months. Pneumonia, measles, convulsions were the causes of death of the majority of the children (ages six weeks to two years). Cause of mother's return to work, poverty."

Another case shows the reason for early return to work:—

Mrs. A.—Husband fireman at factory, short time twelve months, full time wages £1 a week; herself a weaver, 18s. but 10s. short time; has had eight children and buried four; eldest living sixteen years, youngest one month. Returned to factory after twenty-six days on account of poverty, due to slackness at mills; confessed to having told manager it was five weeks since confinement when it was three."

(c) Blackburn.

45. In Blackburn more women absolutely but not relatively to the men are employed in textile factories; there are also more other occupations, such as engineering, for the men, though not to the extent that in normal conditions leaves a large proportion of women (and particularly married women) free to devote themselves to domestic life. Miss Squire found that while "preference for mill life" is the reason given by philanthropic workers and others of experience for the early return of mothers among textile workers after childbirth, the mothers themselves—

"Generally explained to me that one wage was not enough to bring up a family upon, and that the husband would have his 'spending money' whatever the household needs were, and therefore the mother's wage, over which she had control herself, came in handy. . . . The general opinion among those best qualified to judge seems to be that the working classes are well-off, and that if it were not for the proverbial improvidence of the cotton operatives there would be no poverty. Still it seems to be the practice for the women to continue their work in the mill as near to the time of confinement as the manager will allow; always the same complaint was made to me by the manager that he had to keep watch and tell the woman that she must cease work."

46. Miss Squire found that in the case of 234 births registered in 1903 both father and mother were weavers:—

"One would not be surprised to find their children weakly. Probably last year these families would be in poor circumstances, both parents being dependent upon the cotton trade. The men employed in the cotton industry favour restriction being placed upon married women's labour; I received many suggestions on this point."

47. The tendency of the number of women in spinning to increase is the same in Blackburn as in Preston, owing to increase of ring spinning at the expense of mule spin-

ning. Miss Squire finds a high standard of life in Blackburn among textile operatives, comfortable houses and money to spend on excursions, holidays and amusements are considered essentials. She heard adverse comment on the number of weavers and winders, wives of tradesmen, or of men earning good wages, continuing to work and to leave their children to the care of paid nurses or housekeepers. Still she actually found, on visiting at home seventeen weavers, not specially selected, that seven were after several months at home with their infant "not returning"; one was unmarried and likely to return, and the remainder had returned to work because the husband had died, or was out of work or on short time. In one case the mother returned after a month when the father was earning 23s., and the two eldest children 7s. 3d. between them. The mother's return brought in an extra 20s. a week.

(d) Burnley.

48. In Burnley cotton mills the women out-number the men by nearly a third, but there is rather more employment for men in collieries and iron works than in Preston. The standard of life, the sanitary conditions in the houses, and morality, Miss Squire finds lower than in Preston. The illegitimate birth rate is higher. Miss Squire says that the impression produced on her in Burnley, and that it received support from medical men—

"Is that the infants are of a miserable, debased type in a large number of cases. Whereas in Preston the important point seemed to be that the infant should be properly fed, in Burnley it seemed as if no amount of nourishment could build up a healthy child."

The housing conditions are worse, and in some ways conducive to immorality.

49. The notes on the few homes Miss Squire had time in Burnley to visit are painful. Poverty and desertion are the causes of the mother's early return to work. In one case the husband, a blaster, had been injured and could not return to work, so the woman had the whole family to support. In one of the two cases where the mother was not returning to work, it was because she was dying of phthisis, and had worked "as long as she could stand," her husband, a collier, being out of work. She had had seven children, and buried two; the baby, three months old, was injured at birth, no doctor or midwife having been present; the previous infant died from neglect in the same circumstances. In another case, where the mother stays at home, the husband is a collier with good wages, and the wife had ceased weaving since marriage; this, however, did not apparently improve the chance of life for the infants, as she had had twenty and buried sixteen, all having died between one and eleven months of age.

(e) Hanley and Longton.

50. Miss Martindale summarises her information on the reasons for the employment of mothers and early return after child-birth as follows:—

Husbands in regular work	-	-	24
" out of work or working irregularly	-	-	25
" delicate or in an asylum	-	-	3
" dead	-	-	4
" deserted them or separated	-	-	3
Unmarried mothers	-	-	3

"From the above it is evident that thirty-eight women were obliged to work; of the remaining twenty-four women fourteen had stated that they worked in a factory because either their husbands' wages were insufficient to allow for any additional comforts, or they desired to save while able to work, or they wished to be able to maintain an aged mother or father. Ten women were not actually obliged to work, but found the additional money very helpful.

"The lack of employment for men in this district appears to be serious. The master of the workhouse informed me that a short while ago forty able-bodied and carefully selected men were allowed to take their

discharge for from two to seven days, in order to seek for work, their families meanwhile remaining in the workhouse. By the end of the week all the men had returned, not one having been able to find work.

"From my investigations I have come to the conclusion that in very many cases the early return to work is prompted by necessity. It does not appear to me that the fear of losing future work in the factory plays an important part in the question. This may be owing to the fact that the gang system which prevails on the 'pot-banks' provides a large number of employers for women beyond the actual occupiers of the factories, and also owing to the neighbourly kindness which is so great a feature throughout this district, the women have no difficulty in procuring a neighbour to 'locum' for them during their absence.

"It is impossible, however, not to be impressed by the universal preference amongst the women for factory over domestic life. I was continually being told how greatly they preferred their work in the factory to the minding of children, and how depressed and out of health they became if they were obliged to remain at home. Surprising as this appears at first, it becomes less so on consideration. At thirteen years of age the majority of these women would have begun to work in a factory, to handle their own earnings, to mix with a large number of people with all the excitement and gossip of factory life. They would thus in most cases grow up entirely ignorant of everything pertaining to domesticity. After marriage, therefore, it is hardly probable that they would willingly relinquish this life to undertake work of which they are in so large a measure ignorant, and which is robbed of that all is to them pleasant and exciting. Until as girls they have been taught to find a pleasure in domestic work, and until there is a greater supply of healthy and suitable recreations and amusements in the reach of all women, to counteract the prevailing squalor and gloom of these pottery towns, it is useless to expect them to relinquish factory life.

"My attention was drawn to the fact which doubtless has to be faced, that the result of restricting married women's employment will be a decrease in the marriage and birth rates.

"I was interested to find from conversations with working women and men, and others, that (1) the opinion prevails that as parents they have not done their duty unless they have seen to it they every girl as well as boy is provided with a trade; (2) that a woman is looked upon as lazy unless she takes her share in contributing to the family income. In Staffordshire the men and boys appear to willingly do their part in the domestic work of the house, and it is no uncommon sight to find a man cleaning and sweeping, caring for the children or even putting them to bed, on the evenings when the women were engaged with the family washing."

51. Miss Martindale analyses at length the occupations of mothers of illegitimate infants, and points to the large proportion occurring among pottery workers. As this forms an important factor in the problem of support of the mother I summarise the information as follows:—

Illegitimate births, 1902.

		Longton	Hanley
No occupation	-	11	16
Pottery workers	-	67	53
Other occupations	-	14	22
Totals	-	92	91

In these towns as in Preston, marriage of the parents frequently follows, or just precedes, the birth of an infant.

52. Some particulars on lines similar to those given above of the time and reason for early return to work, are in part accessible, or will shortly be accessible, through the help voluntarily given by health visitors in other towns, in the North of England. So far as I have seen them, the facts are very similar both as to causes of early return and effect of occupation. Only one instance of "preference for factory work" by the mother appears.

53. The forces to be reckoned with in any legislative attempt to alter the present withdrawal of the industrial mothers from domestic life seem to group themselves as follows:—

1. The enormous practical difficulties attending the drafting and administering any sort of legal prohibition of employment of child-bearing women. (See in addition to the information in the first division of this memorandum, the press notices of the recent prosecutions in Preston and Dundee.) It is clear that the existing Section 61 of 1901 (and its counterpart in the Act of 1891) has been ineffective as a prohibition even though it extends only to one month. It may have had some indirect effect as a standard in the minds of those willing to be guided.

2. The existence of a considerable number of unmarried mothers without means of support other than their own labour, whose main chance of rescue from degradation lies in the very fact that they desire to labour and know they ought to support their infants.

3. The presence in certain populous industrial districts of a large proportion of married mothers, who are necessarily the chief bread-winners of their families, if those families are to come into existence at all. (There is no doubt that large parts of the cotton industry could not maintain the same standard or be successful without women's labour.) This necessity as regards child-bearing women can apparently only be met by a balanced development in the same centres of men's industries.

Some attention should be given to the strength of the forces of sentiment, constitution, and character, which practically universally secure that the entire earnings of a working woman go to her family. While, no doubt, the girls and young women often spend a good deal on clothes, the married woman who works for "spending money" for herself, apart from her family, is, at present, so rare as to be negligible.

4. If married women should be against their own will and judgment compelled to forego 18s. to 20s. or more a week (see wages above) of the family income for many months, the allegation that there is increasing use of unlawful means to prevent child-bearing in some of the towns mentioned would have to be further considered. Some of the notes on bad influences in Burnley refer to the presence there of this debasing and disintegrating factor*. My attention has also been called to its presence in Nottingham, Leicester and elsewhere.

5. Although Clause D, (see above), preference for factory life, seems negligible as a motive for leaving an infant while only a few weeks old some consideration must, no doubt, be given to the spinner or weaver's natural tendency to take pride in her trade-skill and greater ease in doing work for which she is trained and fitted than work for which she has never been trained—(though she might have been trained if this had ever been adequately thought of as part of national policy).

IV.—MEANS AND AGENCIES OTHER THAN PROHIBITION.

54. Turning to the existing means and agencies other than prohibition of employment for enabling mothers to devote themselves to their infants the first claim for consideration seems to be made by the infants of unmarried mothers. It cannot be too clearly borne in mind that these mothers are discharged from the workhouse infirmaries after their confinement before the four weeks limit in Section 61 is complete. I have never heard of any case where they are kept longer than a fortnight, and I am informed that the time is sometimes less. Ordinary voluntary maternity charities are, as a general rule, although there are exceptions, closed to mothers of illegitimate infants, as also Charity Organisation Society aid. This may or may not be expedient, but there can be no doubt that such facts make prohibition of employment of the mother the most serious remaining injury that can be inflicted, unless some suitable organised means of support can be devised. It is not always the worst of these women who decline to enforce a claim for maintenance, or who are unwilling to stay in the workhouse. There are very few voluntary rescue homes or "penitentiaries" in England where the

* It seems to be my duty to mention that complaints in London have been made to me, and sustained, that girls are employed in the manufacture of articles to prevent conception. This employment is not illegal in England, and official efforts to persuade the manufacturer to discontinue such employment have not succeeded.

mother is allowed to keep her infant with her. So far as I have seen, incomparably the best results are obtained in those homes where this is allowed or organised. I learn recently from an American lady of great experience in such work in the United States, who came over to learn what she could here, that, in our neglect in England to use that essential method, and in the lack of effective trained government control and supervision of those institutions we are far behind the work that is being done in the States.

55. Leaving this special class aside, and looking at the position as a whole, general neglect of the possible voluntary agencies for helping mothers before, during, and after confinement, to take care of the infant life is the chief impression gathered. In Lancashire, where insurance of all kinds abounds (including infant life insurance), Miss Squire was unable to find any form of Provident Society to which women expecting confinement could contribute while still able to earn wages. I believe it was established at Mulhouse that organisation of a maternity fund by manufacturers, to which both employer and employed contributed, resulted in a reduction of infant mortality by half. Whether by local trade effort or larger national effort, provident insurance of the kind might be expected in time to eliminate the present grave number of cases where infant lives are lost to the State at birth, and needless suffering caused to hard-working, valuable mothers by total absence of skilled attendance.

56. Miss Squire found in Preston and elsewhere a local "Ladies' Charity" of a languishing, antiquated character, "for the relief of poor married women in child-bed." She found in the case of one that—

"Since its foundation in 1811 the number of cases relieved annually has decreased from 300 or 400 to under fifty, although the population has increased so enormously. Last year, a time of special poverty . . . only forty-five mothers were assisted . . . The Secretary was unable to explain this except on the ground that there was very little poverty. The relief given takes the form of medical aid, loan of requisite changes of linen, four ounces tea, one pound sugar, one pound barley, four loaves of bread, one yard flannel, and one pound soap."

57. It is evident that such charities must be fundamentally reorganised and brought into touch on the one hand with increased scientific knowledge and skill, and on the other with the changed economic conditions of the women's lives, if they are to serve their original purpose. The highly-skilled and strenuous cotton operative, with her invaluable sense of personal dignity, can no longer be helped in her heavy double work, as mother and as mainstay of a great industry, by old-fashioned charities. "Give her of the fruit of her own hands."

58. In Dundee there is a maternity charity hospital, which expressly excludes distinction between mothers married and unmarried. In that town one of the chief problems seems to be desertion of the mother.* Miss Paterson found over 100 cases in twelve mills, only among the married mothers, and these did not include the cases where the husband lived apart, but contributed something to the mother's support. Very often the wife seems to be left with the whole burden of keeping the family, for little reason except that she is capable of doing it.

"Owing to the absence of the mothers in the mills, there is less opportunity for district or other philanthropic visiting in Dundee than other towns, and little information to be gained through these channels. . . . The extensive employment of women with home duties"

is a matter, Miss Paterson reports, which in the opinion of a member of the Social Union is making all social effort ineffectual. I have so far received no information whether effort has yet been directed in Dundee towards organising provident insurance of bread-winning mothers for the time of their confinements.

59. Miss Martindale says of Hanley and Longton—

"As there is no maternity hospital (with the

exception of the workhouse infirmary) in the district, the women are always confined in their own home, and are usually cared for by a kindly neighbour."

60. In the majority of the towns named, the one most important step so far towards fitting mothers better to care for their infant children is the appointment under the medical officers of health, of health visitors, and women sanitary inspectors. Sanitary authorities are in this way providing for instruction of the mother in the case of every birth of which notice of registration is given by the Registrar. Miss Squire visited some houses with one of these health visitors, and was—

"Favourably impressed with the effect she seemed to produce upon the mothers or nurse, as the case might be. The serious proportion of infant deaths is a matter of common knowledge in the town, and the mothers and nurses seemed to take it as quite reasonable that the Medical Officer of Health should prescribe to them what they might and might not do, and to be impressed with the fact that what their mothers did before them would no longer be allowed to be their guide in the treatment of their children."

61. All the Inspectors have reported on efforts, which have more or less failed to establish crèches for the care of young children, while their mothers are at work. This failure may not be final, but it does appear as though English and Scottish mothers have an instinctive prejudice in favour of individual care by nurses.

"Generally the nurse is a relation of the mother, who, on account of increasing years, has given up work at the mill. . . . They rarely take more than one baby at a time, but they will take two or three children of one family. The charge, 4s. 6d. a week,* for a baby includes its food and the washing of its clothes."

62. During the recent depression in the cotton trade the master of a workhouse—

"Had had a large increase in the number of older and widowed women . . . no longer wanted to mind the home and children while the mother went to the mill."

63. I have already explained to the Committee my belief in the great educational work that can be done by early theoretical and technical training of the girls of this country, the future mothers, in personal, domestic, and infant hygiene. I do not mean by this that anything should interfere with or lessen their chances of having, equally with the boys, all that can be given in primary or secondary education of general training of the mind and understanding. Nor do I mean anything that would lessen the chances for able girls in the humblest classes of rising by means of scholarships to a skilled trade or to higher learning. What I do mean is that for the great masses of future citizens, whether boys or girls, the school education that has nothing to do with and throws out no "ideas" upon the main important duties and occupations of most of their lives, is bound, as education or as instruction, to be more or less a failure.

64. No one can contend, least of all those who have any familiarity with the general ways and objects of factory and workshop girls of, say, fifteen onwards at the present time, that these girls have been given a fair chance of starting life with the beginnings of understanding what they may do for their country as housewives or as mothers. Why should the vast majority of them set a high value on their own services in domestic life, or have even a faint idea that they can be of value as things are treated at present? They are permitted to have for their housekeeping (if they do not earn anything themselves) a fraction of the family income, and they may single-handed work at duties for which the highest knowledge and skill would not be too great, by the dim light of instinct and tradition.† And yet it would be no more irrational to try to fight a modern army with the weapons of two centuries back, than it actually is to leave untaught girls in their

* In Staffordshire 3s. 6d.; in some towns of Lancashire 5s.

† Such tradition as that which defends the feeding of a five weeks old baby on "bread pobbies" that is bread, salt, sugar, and water, "put in the oven overnight to get the balm out of it."

* Reluctance of the mother to enforce maintenance will always in some cases be a difficulty, but some means might possibly be organised for initiating and bearing the expenses of legal steps to secure contribution from the father.

separate "homes" to raise up, in the midst of all the enemies to infant and child life in our urban centres, the future citizens of our country. Some hopeful beginnings have been made; here and there a little domestic economy as an afterthought in the schools, devoted work of medical officers of health with their sanitary inspectors and health visitors in some of the towns. But who can say that adequate sacrifices in money or anything else have been even thought of, much less attempted, to enable the future mothers and housewives to be fit for their task, or to realise that it is a task to which the governing classes of the country attach any value.

65. Until we have even secured that so many infants are neither injured nor die at birth through absolute lack of skilled care of the mother, it seems strange to be planning for future battleships or future armies or talking of old age pensions, or noting with alarm the decreasing birth rate, or discussing the possibility of prohibiting the mother from re-entering the factory for three months or more. In the case under Section 61 mentioned in a footnote above, the woman was absolutely untrained and alone at the birth of her child.

66. It ought not to be impossible to link together in one great national provident and protective association all the isolated, half-informed societies and agencies at work in aid of maternity and for the saving of infant life.* More than that I believe, with Miss Squire, that all over the country, but particularly in the great centres in the Midlands and the North, it needs only an organising mind and purpose to bring such a national movement into being.

67. As regards provision for technical training of the girls, one may point to what is being done for the training of teachers of public hygiene at Bedford College for Women, University of London, and of domestic hygiene at centres such as the Battersea Polytechnic. I need not enter into details or schemes here, but I would point to the striking curves facing page x of the Report of the Moseley Education Commission, illustrating the money value of technical training as compared with trade school, training, shop training, and unskilled labour in the case of men. At present the great masses of housewives and mothers are in the position of the unskilled group, and very

few have even such chances as would be comparable with those of the trade-school group. What the nation needs is to sink some of its capital in work that is comparable with that of the technical school group, and then wait till those trained young women are twenty-five years of age to see the returns begin. It is not training only in the art of laying a fire or cooking a dinner, or washing or dressing a baby that I mean by technical training in domestic hygiene. That is comparable to the work of the trade school, and that we have already in a rudimentary stage, still to be well developed, in the schools. It is domestic hygiene in the more scientific sense, as based on simple broad ideas that can be afterwards applied that I especially mean.

V.—OPINIONS ON AMENDMENT OF THE LAW.

68. Miss Paterson alone offers a definite suggestion as to amendment of Section 61; I have already quoted Miss Squire's suggestion of 1897 (above, on page 3).

"If any amendment of the present Act were made, I would suggest that the word 'knowingly' should be left out, and the employment made illegal—so that in order that the employer should not be held responsible, 'due diligence' (see Section 141) would have to be shown when he or H.M. Inspector could charge the actual offender. I would be glad to see the re-employment at three months made permissible only on production of a medical certificate, showing that the child's health would not be injured by its mother's absence."

69. This does not touch the question of transference of the mother's services to a fresh employer. Unless some provision could be made, comparable to that of Section 73 (which lays on medical practitioners the duty of notifying certain diseases contracted in a factory or workshop), which would require doctors and midwives to report child-birth to the Medical Officer of Health, and thereupon the latter to inquire into and forward to H.M. Inspector of Factories any cases where there is reason to believe that there is return to employment before the proper time, I do not see how such re-employment can ever be controlled.

70. I have already, I hope, sufficiently indicated what I think should be done to improve and make use of the Registers of Births and Deaths.

71. In my earlier evidence to the Committee, I indicated my belief that much remains to be done to make factory work generally less overstraining to the forces of women and girls.

9th May, 1904.

A. M. ANDERSON.

APPENDIX VA

I.

ENGLISH MORTALITY AMONG INFANTS UNDER ONE YEAR OF AGE.

Prepared under Dr. Tatham's direction, from the Official Returns in the General Register Office

The following table is designed to show the changes in the causes of infant mortality in an urban and a rural group of counties during the last quarter of the nineteenth century—the mortality from several causes in the five years 1873–77 being given in comparison with that in the five years 1898–1902. The most striking feature of the table is the comparatively small change during the twenty-five years in the death-rates from all causes—the change in the group of urban counties being a slight increase of between two and three per cent., and that in the rural counties a decrease of a still smaller amount—about 1 per cent. only. These changes being in opposite directions show a wider difference between urban and rural rates in the recent quinquennium than in the earlier one; in the years 1873–77 the rates in the urban counties were higher than those in the rural by 26 per cent. among male, and by 29 per cent. among female children, while in the years 1898–1902 the differences had increased to 30 per cent. and 34 per cent. respectively.

Looking at the several causes of death mentioned in the table it will be seen that (excepting diarrhoea which will be reverted to later) the epidemic diseases to which children are most liable were generally less prevalent in the recent quinquennium than in the earlier one—small-pox, scarlet fever, diphtheria and croup, and erysipelas showing a decline among both male and female children in the urban as well as in the rural counties. Whooping cough also showed a decrease of more than 10 per cent. in the urban counties, but an increase of nearly the same amount in the rural counties, while measles showed an increased fatality among children of each sex and in both groups of counties. There was also a general decline in the mortality from syphilis, tuberculous disease of various forms, meningitis and convulsions, laryngitis, stridulus, bronchitis and laryngitis, teething, and in atrophy debility and inanition. In the aggregate of diseases dealt with in this paragraph there has been a marked reduction of mortality during the recent period, when the rate was 22 per cent. lower than in the earlier years among males in the urban, and among males and females in the rural counties, and 23 per cent. lower among females in the

urban counties. In other words, from these causes infant mortality generally showed a decrease of nearly one-fourth part. The causes which contributed to maintain the total infant mortality at about its former level were diarrhoeal diseases (including enteritis and gastro-enteritis), diseases of the stomach and liver, pneumonia, premature birth, and congenital malformations. The increase of pneumonia mortality is coincident with an increased fatality of that disease in the general population, and although this increase between the two quinquennia is proportionally large it counts but little against the decrease from the other causes just mentioned. With diarrhoeal diseases and with premature birth and congenital defects the case is far different, the increased mortality from these causes being very marked. Taking together diarrhoeal diseases and diseases of the stomach and liver, the recent five years show an increase of more than 70 per cent. in the urban, and of nearly 70 per cent. in the rural counties. From premature birth and congenital defects the increase, though numerically smaller, was proportionally even greater than that from diarrhoeal diseases. Among males in the urban counties the rate had increased by 70 per cent., and among females by 64 per cent., while in the rural counties it had increased by 74 per cent. in each sex. The increased mortality from diarrhoeal diseases is probably attributable in great part to the prevalence of artificial infant feeding, and this view appears to be consistent with the fact that the increase has been greater in the urban than in the rural counties.

One point must not be lost sight of in considering these rates of infant mortality—namely, the certainty that more accurate certification of cause of death has been secured in recent years. This would probably tend to a transfer of deaths from indefinite to definite headings, but the changes of mortality indicated in the above comments are so well marked that they probably represent with approximate accuracy the changes which have actually taken place, apart from this disturbing influence.

TABLE A.—*Infantile Mortality. Causes of Death from various diseases among Male and Female Infants under the age of one year (a) in a group of Urban Counties* and (b) in a group of Rural Counties† in the opening and closing quinquennia respectively of the last quarter of a century.*

CAUSES OF DEATH.	* URBAN COUNTIES.				† RURAL COUNTIES.			
	Males.		Females.		Males.		Females.	
	1873-1877.	1898-1902.	1873-1877.	1898-1902.	1873-1877.	1898-1902.	1873-1877.	1898-1902.
Small Pox	586	44	571	37	33	2	23	1
Measles	3,562	4,963	2,979	4,151	536	513	416	433
Scarlet Fever	1,855	372	1,528	296	364	32	261	27
Diphtheria	395	812	296	660	91	71	70	61
Croup	1,055	212	732	135	217	43	145	30
Whooping Cough	7,105	6,993	7,570	7,503	1,664	1,480	1,624	1,503
Erysipelas	1,117	408	1,198	476	221	48	199	58
Diarrhoea, Dysentery,	24,876	34,481	20,616	29,842	3,392	3,340	2,746	2,556
Cholera								
Syphilis	2,629	2,060	2,349	1,704	362	235	281	182
Starvation, Want of	706	769	674	585	109	114	98	105
Breast Milk								
Rickets	133	1,015	90	662	24	152	10	106
Thrush, Parasitic Diseases	1,592	386	1,329	315	666	105	563	85
Tuberculous Diseases	Phthisis Tuberculous Meningitis, Hydrocephalus Tuberculous Peritonitis, Tabes Mesenterica Other Forms of Tuberculosis, Scrofula							
	1,441	692	1,257	549	426	135	399	100
	4,946	2,949	3,308	2,263	740	378	436	305
	6,480	5,224	5,173	4,083	1,162	671	958	467
	1,236	2,139	1,022	1,669	297	274	252	251
Meningitis, Inflammation of Brain	2,872	4,561	2,045	3,455	258	401	172	296
Convulsions	35,458	26,672	26,244	20,124	8,525	5,214	6,162	3,780
Laryngismus Stridulus	918	548	452	293	94	93	51	44
Laryngitis	274	445	200	309	61	76	35	48
Bronchitis	24,366	21,740	18,645	17,136	4,190	3,463	3,104	2,690
Pneumonia	11,740	18,579	8,832	13,954	2,400	2,631	1,657	1,858
Enteritis, Gastro-Enteritis	1,626	14,664	1,130	12,275	319	1,836	240	1,416
Stomatitis	252	526	201	474	53	98	52	79
Diseases of Stomach	841	3,731	679	3,110	218	591	175	461
Diseases of Liver	1,412	974	881	616	329	209	188	129
Premature Birth	16,953	29,878	13,438	23,230	4,224	5,786	3,203	4,485
Congenital Defects	2,373	7,138	2,067	5,331	618	1,289	529	987
Teething	4,311	3,786	3,344	2,954	785	565	540	444
Atrophy, Debility, Inanition	33,203	30,239	27,597	23,816	10,199	6,315	8,086	4,794
All other causes	14,224	14,536	11,759	11,555	4,153	2,650	3,304	2,060
Total from all causes	210,537	241,536	168,206	193,567	46,735	38,810	35,979	29,841
Total Births	1,197,072	1,342,156	1,155,722	1,297,246	333,956	279,687	319,778	268,966

* (i) *Urban Counties.*—Glamorgan, Lancaster, London, Middlesex, Monmouth, Northumberland, Nottingham, Stafford, Warwick, East Riding, West Riding (York).

Estimated Urban population in 1902—17,818,667.

† (ii) *Rural Counties.*—Buckingham, Cambridge, Cornwall, Hereford, Huntingdon, Lincoln, North Wales, Norfolk, Oxford, Rutland, Salop, Somerset, South Wales (less Glamorgan), Suffolk, Westmorland, Wilts.

Estimated Rural population in 1902—4,279,175.

TABLE A₁ (BASED ON TABLE A).—*Average rate of infant mortality under one year, per 1,000 births, among male and female infants—severally—in the same groups of Counties as in Table A, in the opening and closing quinquennia of the last quarter of a century.*

CAUSES OF DEATH.	URBAN COUNTIES.				RURAL COUNTIES.			
	Males.		FEMALES.		MALES.		FEMALES.	
	1873-1877.	1898-1902.	1873-1877.	1898-1902.	1873-1877.	1898-1902.	1873-1877.	1898-1902.
All Causes	175·9	180·0	145·5	149·2	139·9	138·8	112·5	111·0
Small Pox	·5	·0	·5	·0	·1	·0	·1	·0
Measles	3·0	3·7	2·6	3·2	1·6	1·8	1·3	1·6
Scarlet Fever	1·5	·3	1·3	·2	1·1	·1	·8	·1
Diphtheria and Croup	1·2	·8	·9	·6	·9	·4	·7	·3
Whooping Cough	5·9	5·2	6·6	5·8	5·0	5·3	5·1	5·6
Erysipelas	·9	·3	1·0	·4	·7	·2	·6	·2
Diarrhoea, Dysentery, Cholera, Enteritis	22·1	36·6	18·8	32·5	11·1	18·5	9·3	14·8
Syphilis	2·2	1·5	2·0	1·3	1·1	·8	·9	·7
Rickets	·1	·8	·1	·5	·1	·5	·0	·4
Tuberculous Diseases	11·8	8·2	9·3	6·6	7·9	5·2	6·4	4·2
Meningitis, Convulsions	32·0	23·3	24·5	18·2	26·3	20·1	19·8	15·2
Laryngismus Stridulus	·8	·4	·4	·2	·3	·3	·2	·2
Bronchitis, Laryngitis	20·6	16·5	16·3	13·4	12·7	12·7	9·8	10·2
Pneumonia	9·8	13·8	7·6	10·8	7·2	9·4	5·2	6·9
Diseases of Stomach and Liver	1·9	3·5	1·3	2·9	1·6	2·9	1·1	2·2
Premature Birth	14·2	22·3	11·6	17·9	12·6	20·7	10·0	16·7
Congenital Defects	2·0	5·3	1·8	4·1	1·9	4·6	1·7	3·7
Teething	3·6	2·8	2·9	2·3	2·4	2·0	1·7	1·7
Atrophy, &c.	29·9	23·8	25·8	19·4	33·0	23·7	27·5	18·8
All other Causes	11·9	10·9	10·2	8·9	12·3	9·6	10·3	7·5

NOTE.—·0 indicates that the deaths were too few to give a rate of ·05 per 1,000.

II.

Mortality among Legitimate, as compared with Illegitimate Infants.

In the following tables an attempt has been made to show the relative incidence of mortality from several causes on legitimate and on illegitimate children, in urban and in rural areas. Owing to the large amount of work involved in abstracting these deaths from the registers it has been decided to limit the investigation to the mortality in a single year, viz., that of 1902, and to deal only with London, as representing an urban area. For this reason, the figures relating to several of the diseases, such as smallpox, scarlet fever, erysipelas and laryngismus stridulus are of relatively little significance, and are retained simply to keep this and the preceding table uniform in design. Although for the purposes of an exhaustive inquiry a larger basis of facts would be advisable, the consistent character of the results here presented leaves little doubt that they indicate with approximate accuracy the true conditions as to mortality from various diseases which exist among legitimate and illegitimate children respectively. The top line of the table shows at a glance that there is an excessive death rate among illegitimate children, which is in London about twice as great as that prevailing among those born in wedlock, and in the rural counties, more than one and a half times as great. Glancing down the table it will be seen also that there is a marked excess of mortality under almost every heading, the exceptions occurring only in the cases of those diseases which are relatively so uncommon as to give too small a basis for comparison. Diarrhea (with enteritis and diseases of the stomach and liver) and atrophy cause exceptionally high mortality among illegitimate children, the rate from these diseases in London being two and a half times as high among male, and more than three times as high among female illegitimate, as among legitimate, children; in the rural counties, too, the mortality from these diseases among the illegitimate is about twice as high as that among

the legitimate. Syphilis is enormously more fatal among the illegitimate than among the legitimate, both in the urban and in the rural areas, premature birth and congenital defects also cause excessive mortality among the illegitimate, especially in London. Comparison of the figures for London with those for the rural counties shows a great excess of mortality among illegitimate children in the former area; for, whereas, among legitimate children in London the death rates are in excess of those in the country by about one-fifth part, among the illegitimate the London rates exceed the country rates by more than 50 per cent. among boys, and by nearly 60 per cent. among girls. This excess is especially noticeable in the case of diarrhoea, from which disease the rates are about twice as high among legitimate children in London as in the country, and about three times as high among illegitimate. There is reason to believe, too, that this excessive mortality among illegitimate children in London is understated rather than overstated, for it is a known fact that many unmarried women who reside outside registration London are admitted to London hospitals at the time of parturition, and that the births are registered in London. The official records do not show what becomes of the mothers or of the children after discharge from the hospital, but it is almost certain that most of them at least return to the place whence they came, so that deaths among these children which occur more than a few weeks after birth are in all probability registered outside London. On the other hand, some few legitimate children who are born elsewhere than in London may be placed out to nurse with people residing in London, and any deaths among them would be registered in London if they occurred there. It is unlikely, however, that these latter cases would be as numerous as those first mentioned.

TABLE B.—*Mortality among Legitimate and Illegitimate Infants, respectively, in the year 1902.—Average rates of death from various causes, under one year, per 1,000 births (a) in London and (b) in the same Rural Counties as in Table A.*

Causes of Death.	London.				Rural Counties.			
	Males.		Females.		Males.		Females.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
All Causes.	151·2	289·3	118·7	264·1	125·6	190·2	98·8	166·1
Small Pox	·2	—	·1	—	·0	—	·0	—
Measles	4·1	4·2	3·4	6·0	2·9	1·8	2·3	1·5
Scarlet Fever	·2	·4	·2	·4	·2	—	·1	—
Diphtheria and Croup	·8	·4	·6	·4	·4	·4	·3	—
Whooping Cough	6·1	4·2	6·2	8·6	5·2	5·7	5·8	6·6
Erysipelas	·2	·4	·4	·4	·2	—	·3	—
Diarrhoea, Dysentery, Cholera, Enteritis	20·6	48·6	16·3	47·9	9·0	14·1	6·3	13·9
Syphilis	1·9	19·7	1·1	9·5	·4	3·2	·5	4·0
Rickets	1·0	4·2	·6	1·7	·5	1·4	·5	1·5
Tuberculous Diseases	7·9	18·0	6·5	13·8	4·9	6·4	3·3	6·2
Meningitis, Convulsions	13·7	20·6	10·0	20·3	18·7	26·5	13·7	23·0
Laryngismus Stridulus	·4	·8	·3	—	·3	·7	·2	—
Bronchitis, Laryngitis	13·5	18·0	10·5	17·3	11·8	15·2	10·5	16·8
Pneumonia	17·1	18·5	13·1	17·7	11·4	13·1	7·8	7·7
Diseases of Stomach and Liver	2·5	4·6	2·6	5·6	2·2	3·9	2·0	2·9
Premature Birth	23·1	34·4	17·4	33·7	20·3	30·4	15·9	19·7
Congenital Defects	6·4	9·6	4·3	7·3	5·5	3·9	4·2	4·7
Teething	1·7	5·0	1·6	2·6	2·2	2·1	1·6	4·4
Atrophy, &c.	17·2	50·8	12·8	45·7	20·4	41·7	16·9	36·9
All other Causes	12·6	26·9	10·7	25·2	9·1	19·7	6·6	16·3

NOTE.—·0 indicates that the deaths were too few to give a rate of ·05 per 1,000.

III.

Age-Incidence of Infantile mortality, in weeks and months of the first year of life.

The following tables are added to show in detail the age incidence of mortality among legitimate and illegitimate children under one year (a) in London and (b) in the rural counties. Table B₁ gives the actual number of deaths recorded at the several selected age groups of the first year of life: Tables B₂ and B₃ give proportions based upon those numbers, one giving the percentage of deaths at each age to the total deaths registered under one year of age, and the other the number of deaths recorded at each age to 1,000 births registered. Taking, first, the table of percentages of deaths at each age, it will be seen that a larger proportion of legitimate than of illegitimate children die during the first month of life, except among male children in the rural counties where the proportions are practically identical. For the next few months after the first, the case is different, the percentages of deaths being generally the greater among the illegitimate, while in the later part of the first year the proportions of deaths among the illegitimate are again the lower.

Here also the explanation of the curious differences would seem to depend in part upon the number of illegitimate children born in hospitals or infirmaries. Admitting the practical certainty that a larger proportion of illegitimate than of legitimate children are born in such institutions, and further admitting the prevalence of a lower rate of mortality among newly born children in these institutions than in the general population—especially in the poorest and most ignorant part of it—it follows that

illegitimate children born in institutions and there efficiently cared for, are preserved during the first few weeks of life, but become subject to a high death-rate on leaving these institutions. These remarks, referring as they do to the *percentages* of deaths registered at the several ages do not, of course, imply that the actual *death-rates* are at any time lower among the illegitimate than among legitimate children: the table giving the proportion of deaths at each age to children born shows that such is not the case, but that, on the contrary, the mortality at the earlier ages, is much the higher among illegitimate children. It shows, however, that this excess is proportionally much greater among children during a few months of life after the first, and that towards the end of the first year the rates among the illegitimate approach very nearly those among the legitimate children.

It might be objected that the number of deaths of illegitimate children is so small as to render unsafe any comparison of death-rates derived from them. On this point, however, it must be remembered that they are the deaths of illegitimate children occurring among more than 130,000 births in London and more than 100,000 births in the rural counties; while the consistent nature of the results obtained would seem to indicate that the figures here presented represent very nearly the true conditions of mortality which prevail among legitimate and illegitimate children respectively, in London and in the selected rural counties.

TABLE B₁—Deaths among legitimate and illegitimate Infants respectively, in the year 1902. Age incidence of deaths at the several age groups under one year (a) in London and (b) in the same group of rural counties as in Table A.

AGES AT DEATH.	LONDON.				RURAL COUNTIES.			
	Males.		Females.		Males.		Females.	
	Legiti-mate.	Illegiti-mate.	Legiti-mate.	Illegiti-mate.	Legiti-mate.	Illegiti-mate.	Legiti-mate.	Illegiti-mate.
Under one week - -	1,776	100	1,163	99	1,515	112	1,074	87
1-2 weeks - -	455	26	318	28	330	38	237	23
2-3 , , - -	435	28	325	20	298	26	259	25
3-4 , , - -	317	27	308	13	241	21	164	11
Total under one month	2,983	181	2,114	160	2,384	197	1,734	146
1-2 months - -	1,026	103	764	86	738	73	570	57
2-3 , , - -	764	88	594	64	556	53	418	39
3-4 , , - -	707	73	555	44	491	39	332	41
4-5 , , - -	603	40	450	45	384	31	301	30
5-6 , , - -	552	43	394	39	336	33	244	24
6-7 , , - -	565	37	421	39	320	28	248	27
7-8 , , - -	534	34	412	31	301	25	231	22
8-9 , , - -	541	28	421	28	303	15	219	17
9-10 , , - -	468	25	401	24	282	15	212	25
10-11 , , - -	481	20	397	19	243	16	224	15
11-12 , , - -	444	18	414	33	204	13	202	12
Total under one year -	9,668	690	7,337	612	6,542	538	4,935	455
Total Births - -	63,952	2,385	61,824	2,317	52,093	2,828	49,962	2,739

TABLE B₂.—Mortality among legitimate and illegitimate Infants respectively, in the year 1902. Proportional age incidence of deaths at the several age groups, to one hundred deaths at all ages under one year (a) in London, and (b) in the same group of rural counties as Table A.

TABLE B₃.—Mortality among legitimate and illegitimate Infants respectively, in the year 1902. Deaths per 1,000 births at the several age groups under one year, (a) in London, and (b) in the same group of rural counties as in Table A.

AGES AT DEATH.	LONDON.				RURAL COUNTIES.			
	Males.		Females.		Males.		Females.	
	Legiti-mate.	Illegiti-mate.	Legiti-mate.	Illegiti-mate.	Legiti-mate.	Illegiti-mate.	Legiti-mate.	Illegiti-mate.
Under one week - - -	27·8	41·9	18·8	42·8	29·1	39·6	27·8	31·8
1-2 weeks - - -	7·1	10·9	5·1	12·1	6·4	13·4	4·7	8·4
2-3 ,,- - -	6·8	11·8	5·3	8·6	5·7	9·2	5·2	9·1
3-4 ,,- - -	5·0	11·3	5·0	5·6	4·6	7·4	3·3	4·0
Total under one month	46·7	75·9	34·2	69·1	45·8	69·6	34·7	53·3
1-2 months - - -	16·0	43·2	12·3	37·1	14·1	25·8	11·4	20·8
2-3 ,,- - -	11·9	36·9	9·6	27·6	10·7	18·7	8·4	14·2
3-4 ,,- - -	11·1	30·6	9·0	19·0	9·4	13·8	6·7	15·0
4-5 ,,- - -	9·4	16·8	7·3	19·4	7·4	11·0	6·0	11·0
5-6 ,,- - -	8·6	18·0	6·4	16·8	6·4	11·7	4·9	8·8
6-7 ,,- - -	8·8	15·5	6·8	16·8	6·1	9·9	5·0	9·8
7-8 ,,- - -	8·4	14·3	6·7	13·4	5·8	8·8	4·6	8·0
8-9 ,,- - -	8·6	11·7	6·8	12·1	5·9	5·3	4·4	6·2
9-10 ,,- - -	7·3	10·5	6·5	10·4	5·4	5·3	4·2	9·1
10-11 ,,- - -	7·5	8·4	6·4	8·2	4·7	5·7	4·5	5·5
11-12 ,,- - -	6·9	7·5	6·7	14·2	3·9	4·6	4·0	4·4
Total under one year -	151·2	289·3	118·7	264·1	125·6	190·2	98·8	166·1



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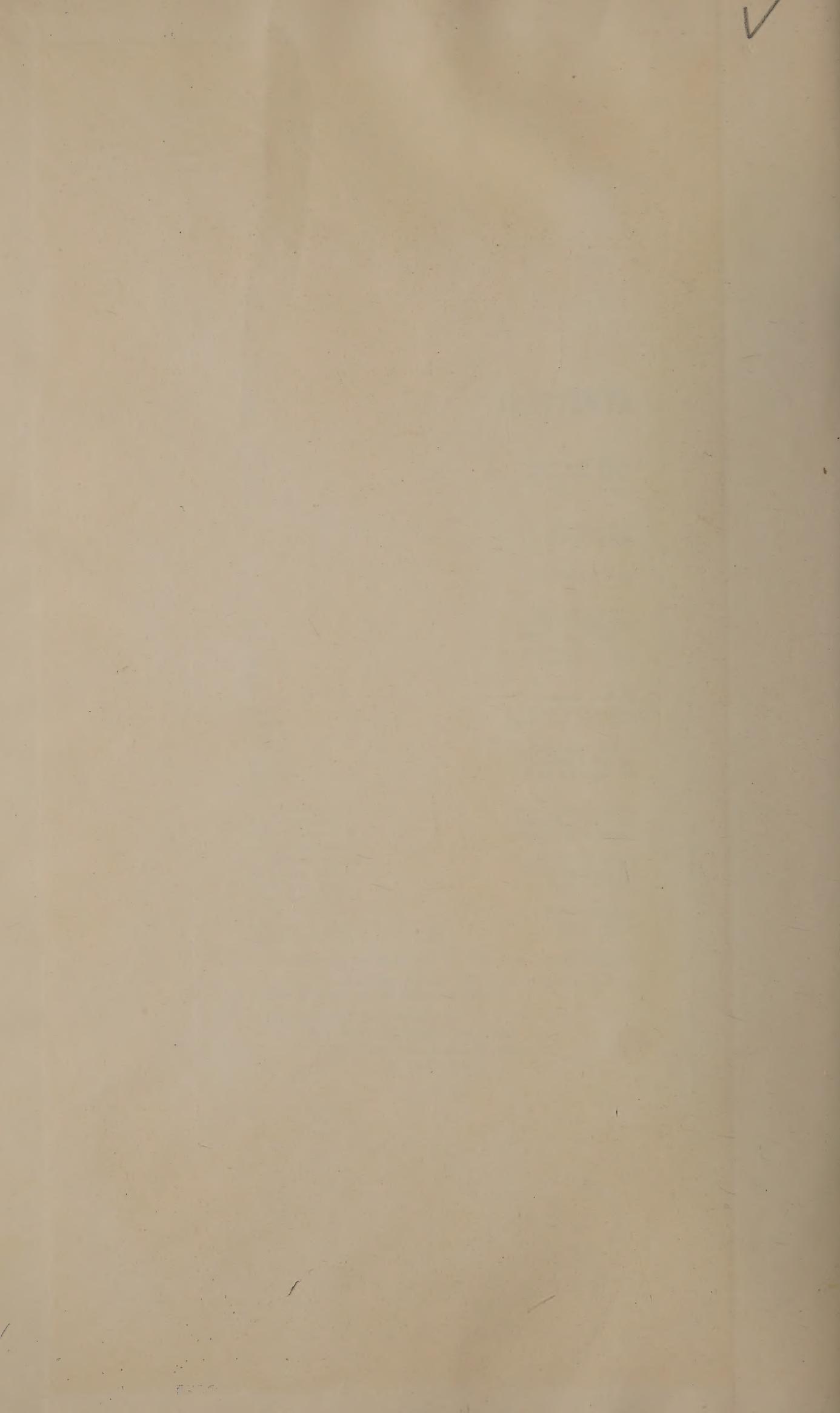
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